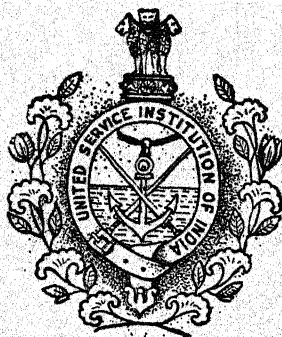


With Supplement : Jawaharlal Nehru—the Warrior

U.S.I. JOURNAL

(Established 1870)



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APRIL-JUNE 1964

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“Let us pull ourselves together and create an atmosphere of co-operation and work for the advancement of India and of all who live here as her sons. Thus only can we serve our motherland and help in making her great, united and strong.”

—Jawaharlal Nehru

one nation, one country

“Let people in different parts of the country — however strong their feelings might be on particular issues — never forget that they are Indians first, and that all differences must be resolved within the unalterable framework of one nation and one country.”

—Lal Bahadur Shastri
Prime Minister

Our way is straight and clear—to build a strong India with freedom and prosperity for all.

Let us march together, work together as one nation, imbued with courage and determination, goodwill and tolerance.

JAI HIND

PRESERVE UNITY, PROTECT FREEDOM

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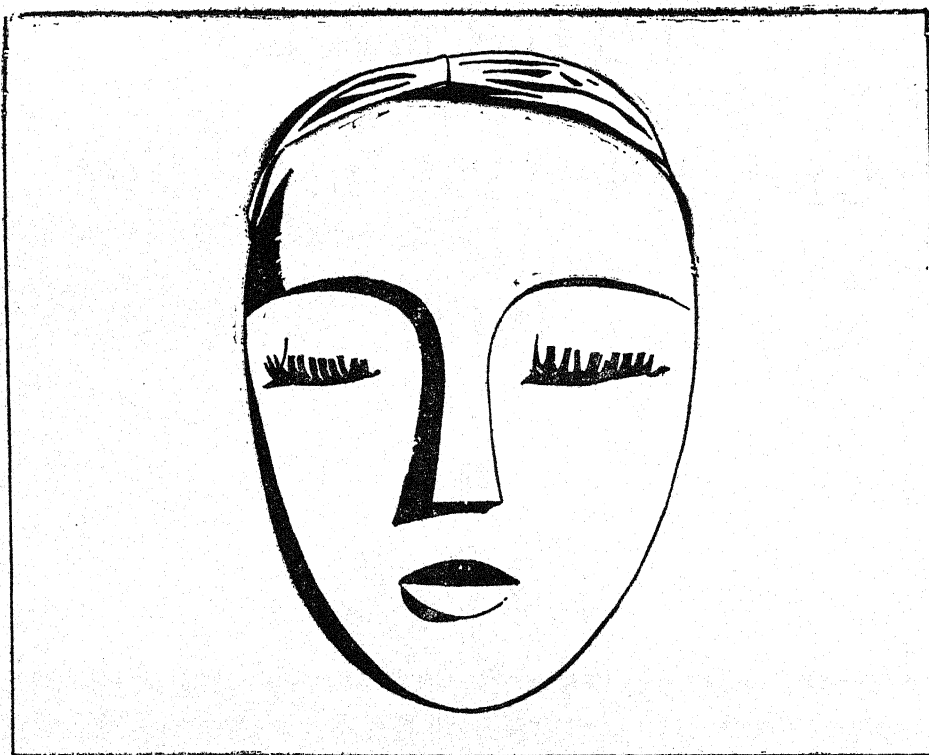
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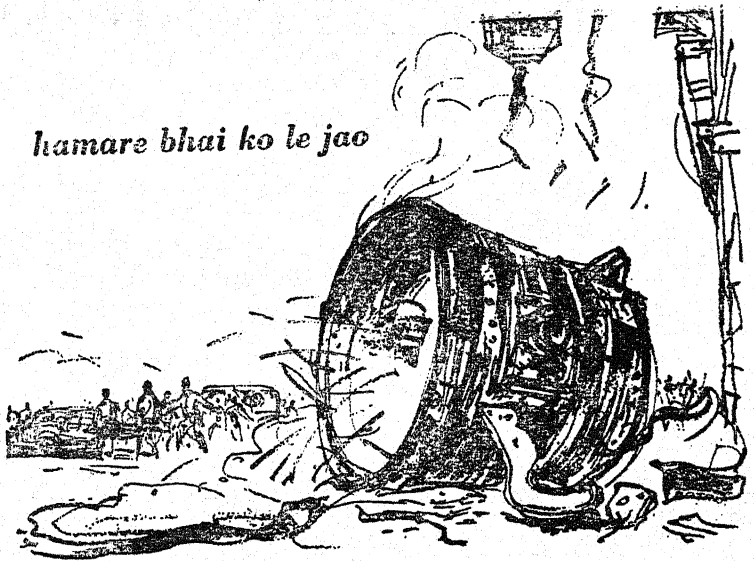
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hamare bhai ko le jao



It happened some years ago in the steel melting shops at the Jamshedpur works. A large ladle, carrying 75 tons of molten iron, suddenly crashed to the ground with a deafening noise from an overhead crane. The spattering sparks and red-hot metal seriously injured a number of brick-layers working at what seemed to be a safe distance. The air was rent with the frenzied shouts of the men and the hissing of steam.

The first ambulance could remove only five of the injured to the hospital. General Manager Keenan could take only three more in his car. He chose the three who had a better chance of survival than the rest. One of these men, a Hindu worker, however, refused to go. "Do not take me away", he said. Disregarding his own agony, he feebly nodded towards a half-burnt Muslim colleague, and said: "*Hamare bhai ko le jao.*" As Keenan recalls, "The Hindu who was in pain and danger of death remembered, not that the Mohammedan was of a different faith, but that he was his brother."

This feeling of comradeship, born of the common bond of labour, is the spirit that characterises Jamshedpur, where industry is not merely a source of livelihood but a way of life.

JAMSHEDPUR

THE STEEL CITY

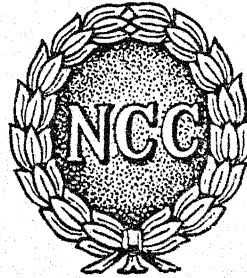
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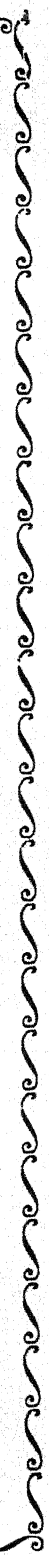
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AIMS OF THE NATIONAL CADET CORPS

1. To develop character, comradeship, the ideal of Service and capacity for leadership in young men and women.
2. To provide Service training to young men and women so as to stimulate interest in the defence of the country.
3. To build up reserve of potential officers to enable the Armed forces to expand rapidly in a national emergency.





The late Prime Minister, Shri Jawaharlal Nehru, contributing to the Flag Day Fund December 7, 1963

"Our Jawans are gallant and trained men and can give a good account of themselves in fighting. They can stand up to any odds. So we depend upon them. But they have to be backed by the whole country and have to be provided with equipment. The whole country has to care for them and for their families. This is our duty and we are doing it. Their families, their wives and children, are the wards of the nation and it is the nation's duty to look after them."

—Broadcast to the Nation on National
Solidarity Day, October 20, 1963

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"THE WARRIOR"

We pay homage to the memory of Jawaharlal Nehru, who died on May 27 after a lifelong struggle to bring peace and happiness to mankind.

Jawaharlal Nehru was in the vanguard of India's struggle for Independence and thereafter, for 17 years, he charted the course of the nation's progress through perilous waters, as the Prime Minister. His greatest contribution to world history, perhaps, lay in his success in introducing an element of sanity and moderation into a world torn by fear and split into power blocs—hopelessly adrift and heading towards a nuclear holocaust. A true warrior, Nehru understood the meaning of peace and passionately advocated a farewell to arms. The alternative to total disarmament, he said, was total annihilation. At the same time, Nehru understood the need for adequate defence forces in the world of today. As he himself put it, speaking over the B.B.C. in 1951, "I am not a pacifist. We have to protect ourselves and prepare ourselves for every contingency. We have to meet aggression and evils of all kinds. To surrender to evil is always bad."

Throughout his crowded life as Prime Minister, Jawaharlal Nehru tried to seize as many opportunities as possible, to maintain close contact with the Armed Forces, particularly the rank and file. Indeed, Jawaharlal Nehru was the true friend and leader of the Jawan, who in turn, regarded him with affection, respect and devotion. His passing has therefore created a void in the life of the Jawan—by nature, a simple man—a man of the soil—very basic in his thinking and spread from one end of India to the other. It was this common bond—so earthly in character—that bound the late Prime Minister and the Jawan so closely together.

Since Independence, the Services have been a tremendous force for good in unifying peoples at all levels. Inspired by these qualities, the Army has been a microcosm, mirroring what Jawaharlal Nehru had worked so hard to bring about in the rest of India—complete national integration.

Today, the soldier, perhaps more than anyone else realises the extent of the loss we have suffered in the passing of Jawaharlal Nehru. They mourn him, and of course, they will always mourn him, but he leaves a legacy for which they are determined to strive and perhaps that could remain the finest monument to his memory—the legacy of Unity in Diversity. The esprit-de-corps of the Services must now spill over more quickly to other parts of the country. If this happens—then some of the vast debt we owe Jawaharlal Nehru would have been paid.

NATIONAL MILITARY MUSEUM

India is perhaps the only country in the world without a national military museum. It is sad that, despite its centuries of recorded history, this country has not displayed objects relating to its military past at a central venue.

It is true that a few scattered exhibits of military interest are on display at various museums in the country. There are, also, scattered across the length and breadth of India, arms and armaments, paintings and manuscripts in old clubs, messes, palaces, family mansions and in possession of individuals. But, nowhere does one get a fair representation of the magnificent panorama of our martial tradition.

A number of modern museums have been coming up in the country during the recent years. For instance, a motley collection of gifts displayed in the Rashtrapati Bhawan has grown into a fine national museum in the Capital. Besides, there is a lively interest in the military among the people today, more perhaps than ever since India became independent. The common man today is vitally aware of the role played by the armed forces in the defence of the country. Among the academic circles also, there is a growing interest in all aspects of the military.

The time is now ripe for deciding at the highest level to set up a national military museum, to lay aside sufficient funds and to allocate a suitable site for it. It may also be advisable to constitute a body of experts to prepare the plans for such a museum. Simultaneously, they could undertake the collection and cataloguing of various exhibits, wherever they are found in the country, that would form part of the proposed museum. It may also be profitable, perhaps to examine various military museums abroad and study the latest advances.

In absence of vigorous steps to create a national military museum, we may find that the precious relics of our martial tradition are dispersed and dissipated through lack of interest. Without scientific care, the toughest parchment will eventually turn to dust and the finest sword will rust away. The absence of a national military museum, therefore, is a deficiency which should be made good without delay.

ACT, OR PERISH!

(ON PREPARING AGAINST THE CHINESE MENACE)

BY MAJOR K. BRAHMA SINGH

INTRODUCTION

The show-down with China has re-affirmed at least one principle: that, however firmly a country may decide not to wage a war, war can be thrust on it. This, naturally, leads on to the conclusion that even a peace-loving country has to be prepared for war. I say 're-affirmed', because nothing new has been brought about by the Chinese invasion. It was just history repeating itself. What a price we paid for learning this simple lesson! Instead of now waiting for the history to repeat itself again to teach us some more costly lessons, let us, then, benefit from the past and prepare ourselves fully against the Chinese menace.

Modern wars are total wars and our conflict with China is that of a nation against nation and not merely that of two opposing armies. We must also understand that the mode of invading countries has changed these days. In the present times where prolonged armed action is sure to set off a world war, meaning total annihilation, invasion may take the form of a limited armed action to create ground for sowing the seeds of political unrest, a gap for the seeds to sprout under the ideal conditions of complacency, and successive short actions, thereafter, to act as boosters to the growth of such unrest, till the final capitulation. The military cease-fire on our borders is, therefore, no indication of a lull in the war. The political war, though latent, is still on and warrants our vigilance.

THE TASK

THE task before the country is two-fold. Firstly, regaining the lost territory and secondly countering the typical communistic infiltration. This task, no doubt, is colossal, but in its efficient execution only lies our safety. The question of modification of this task does not arise because this task has been set for us by the Chinese. It is a challenge to our very existence. The tendency, therefore, to modify our task to suit our economic or political convenience must be checked.

REALISATION

After assessing the task thus, it is most important that we realise that whatever the magnitude of our task we have no option but to accomplish it. The law of nature, "survival of the fittest", holds good even in the present times. Had we been strong, China would not have dared act

as she did. She has a better claim on Formosa, with a lot of world opinion on her side, then why does she not invade Formosa? Now poison has been injected into one of our limbs and unless we act to cure it now, it is bound to spread to the rest of the body. Even if we show cowardice now and give away what they are demanding, what guarantee is there that they will not demand more after some years? It, therefore, is a case of struggle for existence and we really do not have any option but to act.

Sense of urgency: The second realisation that must come to the nation is the need for urgency in our action. We cannot afford the conventional way of doing things because

- (a) by the time we are ready to act, the Chinese would have so well entrenched themselves in our territory that the advantage of time gained may be offset by the increase in effort required to oust them.
- (b) the seeds of political disorder sown by the Chinese may sprout by then and our struggle may assume two fronts, resulting in a division of effort. And finally,
- (c) by delaying our action, we will, as a matter of fact, only be postponing the inevitable which could have been faced with advantage in 1954 when Tibet fell.

The second factor that dictates urgency is the fact that we are miles behind the Chinese in our preparation for war. Now, therefore, not only have we to keep pace with China's present preparations but also have to make up the lead already taken by her.

Convenience: The third realisation that must come to the nation is that convenience is a very elastic thing. If things are allowed to take their own course it never becomes convenient for us to do anything. Convenience is like a wild horse that has to be tamed, harnessed and ridden. A resolute decision invariable opens up ways of convenience. Our efforts should, therefore, be more in consonance with the needs of our task than with our convenience.

PRE-REQUISITES

Will to fight: The foremost pre-requisite of preparing for war is the *will* of the nation to fight. No nation can wage a war without the *will* to fight, which alone enables its people to bear the stress and strain of war to the bitter end. It is this *will* that will open up ways and means to muster up our resources. Only this *will* can eradicate corruption and tax-evasion, ensure proper use of funds, and produce self-sacrificing, honest and hard-working manpower—for which there is no substitute, least of all, arms aid from abroad.

Only the test of war can adequately gauge the nation's will to fight. But there are clues which should be watched carefully. Any sign of corruption or neglect in strategic departments is an unhealthy sign.

For a nation that has never been put to the acid test of war, it is all the more difficult to assess its will to fight. So little was India affected by the two world wars in this century that it might be said that its people could even profiteer without doing much damage to the cause. Our present conflict with China, on the other hand, was so short-lived from the point of view of armed conflict that the strain put on the nation was negligible in comparison with what it will be in a full-fledged war. The people had hardly a chance to sacrifice their comforts and luxuries for the sake of the country. (I hope that nobody feels that the people have shared the burden of war by contributing Rs. 56 crores to the national defence fund.) Even the great 'Bravo' that came to the Jawan from the home front is no indication that the same will be repeated when the homes are also aflame.

Moreover, we cannot afford to build up our people's will to fight through waging a war, for the price of it may be defeat. We can, however, learn from history and study how Great Britain built up and sustained its people's will to fight during prolonged wars. China fought the United States in Korea with little besides the strong will of her people to fight. War is a savage game, and savage slogans that arouse bitter hatred towards the enemy will also awaken the dormant martial feelings of a nation, so long as the people are convinced of the "revenge" or "Act, or Perish" aspects of our cause.

Dependence on foreign aid adversely affects the will to fight. It creates a sense of false security and leads to lethargy and moral weakness. It is like a rich man's son losing value of money he has had no hand in earning. Besides, foreign aid, being uncertain and having implications, is unreliable. Therefore, it can be treated as a bonus, but not as the basis of our war capacity. Faith in our own capability is the only solid foundation on which we can build up our people's will to fight.

It will have to be admitted that, at present, although a lot of effort is being expended in enhancing the *will* of the soldier, equal effort to develop the *will* of the nation as a whole is not being made. It must be realised that the *will* of the soldier at the fronts depends on the *will* of the civilians at home.

RESOURCES

The other pre-requisite to waging war is the correct assessment and mustering up of the vital resources of men and material required for waging war. As for our man-power, we could not have been luckier. Our country has a large source of professional fighters, unparalleled in the world. Even if our armed forces are quadrupled, we will not lack a regular flow of recruitment. The material resources, however, pose a problem. So immense is the problem that it is causing the national mind to drift towards the easier but the very wrong course of dependence on foreign aid. Too many people have started feeling that we do not have sufficient material resources to fight the Chinese. Unfortunately, while calculating our

resources, it is often overlooked that the present state of planning and expenditure is by no mean a Constant, incapable of any improvement. Naturally, what can be spared today for defence is found insufficient.

This mode of calculating our resources ceases to be valid the moment we consider that our struggle with China is the struggle for our very existence as a nation. Where is the Indian who would like to raise his standard of living at the cost of losing our sacred territory—and who would enjoy his higher standard of living attained by endangering his very existence? Once the thinking commences on these lines, we should no longer find ourselves lacking in material resources.

As for the choice between economic development and defence, one could do no better than to relate the Biblical episode about how the peace-loving Hebrews faced the threat from the Helamites. Having bent all their energies towards the economic development, the Hebrews had barely completed a dam across the Jordan river when their land was invaded by the jealous Helamites. Greatly outnumbered and generally unprepared for waging war, the Hebrews had no defence except the dam itself. The use of this weapon meant a waste of years of hard labour, no less the shattering of their dream of prosperity and abundance. The choice had to be made between liberty and prosperity. The Hebrews made their choice, destroyed the dam and defeated the enemy through drowning. It was a costly victory, but no price is too high for liberty.

THE ARMED FORCES

The strength of our armed forces will have to be such that they are able to perform their task. Anything less than adequate will amount to an utter waste. What has been planned so far and made public appears to have been based not on necessity but on convenience. The number of troops that we require is dictated by our enemy. We ourselves have no choice. Our role lies only in making the correct assessment of the enemy strength and what he is capable of mustering.

Political role: The Chinese have unique tactics, in which the armed and the political forces are combined in the invasion. Therefore, our army too will have to fulfil a political role beside the normal combat role. The political role is all the more important since the army is operating in politically backward areas. Every act of an individual of the armed forces, in his day-to-day life, therefore, creates very deep impressions on the locals, which build up a far-reaching cumulative result. The political consciousness of the soldier needs to be developed much more than what it is to-day.

Age limit: Since the fighting efficiency of an individual in mountains and jungles decreases as he enters higher age groups, he must be retired earlier. This poses a problem, psychological and economic, for the individual and the State. In order to avoid the economic loss, such troops will have to be given jobs elsewhere. Since there are few suitable jobs in

the Army itself, jobs will have to be found in the civil industries connected with defence, ideally. If such industries are organised on the regular army basis, maintaining the same chain of command as for the Army, an increased efficiency will result.

Practical approach: While preparing themselves for the ultimate offensive, the armed forces have to be ready for meeting any eventuality developing immediately, with whatever resources they may possess at the time. The solution to the problem of fighting successfully with inadequate resources, unfortunately, is not found in our manuals and pamphlets. Knowing that fight we must, whatever the resources, a more serious thinking will have to be done on how to conduct the war under unfavourable conditions of preparedness. Mere recital of various principles of war in our training will not lead to preparedness. The conventional methods hold good only when units are assigned tasks equal to what they are meant to perform. When giving of increased tasks is necessitated by the lack of troops, methods of performing these tasks must also change.

Civil understanding: By civil-military understanding, it is not meant to refer to the normal civil-military relations, which are, by and large, good. What needs to be impressed is a better civil understanding of military employment, capabilities and limitations. In a democracy, the civil authority is supreme and the armed forces are instruments of exercising the civilian will. The question is, how the civil authority can use the military without a basic knowledge and understanding of the military art and science. At present, it is feared, the knowledge of most of the civilians, many of them in key locations, does not go much beyond the rank structure of the armed forces. This much of knowledge is not sufficient for the nation to wage war. Ideally, every citizen should be conversant with the broader aspects of the armed forces. But a thorough knowledge of the military science for the authorities directly concerned with the employment of the military is a basic necessity.

Defence Production: Applying the time-honoured maxim of 'first things first' to defence production, we must look anew at the personal equipment of the infantry soldier on which would depend his efficiency and the subsequent efficiency of the supporting elements. The foremost requirement in the interest of increased efficiency is to lighten the burden off the shoulder of the infantry soldier. Even before we develop supersonic fighters and tanks, therefore, there is the urgent need to manufacture durable socks, boots and clothing for the infantry soldier. Top priority should be given to some of the items, including those mentioned below:

- (i) *Battle dress:* Our dress at present is rather heavy particularly on account of the web equipment and the spare clothes required to be carried. What we need is an over-all type battle dress, which is waterproof and provided with sufficient large pockets to eliminate the necessity for carrying web equipment. It should

have a detachable woollen lining. It should be durable enough to obviate the necessity of carrying spares.

- (ii) *Jungle boots*: The present jungle boots are well-designed; but one's heart aches when they give way after seven days' wear on patrols. Not only a large number of spares have to be carried on long patrols, but their lack of durability results in a colossal waste of money. What is needed is a durable jungle boot which is light and which dries up quickly.
- (iii) *Sleeping bag*: The Service blanket, specially when more than one has to be carried, imposes a considerable burden on the infantry soldier. What is needed is a light sleeping bag, weighing five pounds, or less, but at least as warm as two Service blankets, for use in moderately cold regions, particularly for patrolling and special missions.
- (iv) *Powdered food*: The present composite rations, by their nature and composition, are cumbersome for carriage. We should seriously engage our attention in finding/evolving a suitable single item of food that, while sufficiently nourishing, could be carried in the powdered form and need not be cooked: something like powdered milk, needing just a little water to be added to it for making it ready for consumption: let us say an improved form of the *sattu* eaten in our villages.*

SECURITY OF LOCALS

By security of locals it is not meant to refer to their security from armed aggression, but to that from political sabotage, to which politically backward people are particularly vulnerable. This security of the locals can be assured by taking the following steps:

Economic uplift: Mere lectures or sermons cannot alone develop the spirit of nationalism among the locals nor safeguard them from the enemy propaganda. They will realise the deep roots of their loyalty towards the rest of the country when they are helped to identify themselves economically with it. Their economic uplift must be carried out with the utmost despatch. Any delay will prolong the period during which the locals are exposed to enemy propaganda. As for their present economic state, the less said the better. It is incredible but true that there still are shortages of the basic necessities of life, such as the common salt, in the NEFA. One has only to tour the interior to see the real condition. The colourful dances which most of us associate with the locals are to be found in only a few, comparatively better off places. That the locals are averse to change is a lame excuse, at best. Let alone their basic needs, there is even demand for luxuries like cosmetics. The only thing they resent is a change in their customs—for which they should be allowed to wait as long as they like.

*U.N. experts have successfully assisted in the introduction of popular, *sattu*-type, synthetic foods which contain all the necessary nutritional ingredients, and are adapted to the local resources and local tastes in some Latin American countries. Aimed at improving the diet of the under-nourished and the poor, these foods are made from locally available raw materials and are very cheap.—*Editor*.

I am of the firm opinion that not only should we cater for the existing needs of the locals, but we should also create more needs among them so that their economy becomes increasingly integrated with the rest of the country. This is the only way we can effectively counter the Chinese propaganda.

Communications: Easy communications are necessary to extend the Government influence to the remotest corners of border areas. It takes time to build roads, and roads cannot be built invariably to all the remote corners. But, nothing prevents us from making good tracks to link up all the villages straight away. Some of the existing tracks are so difficult that even the Army patrols have at times to struggle on them. We cannot expect the civilian staff to tour these villages more frequently than absolutely necessary, using these tracks.

Missionary Zeal: Social and economic uplift of these locals calls for self-sacrifice and a sense of devotion from the workers: a task unsuited to the selfish, job-seeking kind. The Government servants operating in these areas must be specially selected and trained. It is the lower-level officer on whose ability and action depends the fate of the nation. In a vast and religious-minded people like ours, there should be no dearth of people who will volunteer to serve our people in these areas.

We are, no doubt, a secular nation; but, if the spread of religion will strengthen the ties of these backwards areas with the rest of the country, where is the harm in encouraging religious missionaries in these areas? One thing, will have to be made certain—and that is the central control of the government over all such missionary work, whether religious or political.

CONCLUSION

The Chinese have thrown a great challenge to our nation, which we must accept not only on grounds of self-respect but also because a grave threat has been posed to our very existence. We cannot afford to overlook the law of the Nature—"survival of the fittest". Whatever our moral codes, the brutal game of war will have to be played—not because we like to play it, but because a savage nation, devoid of civilisation, will not desist with war-mongery till we retaliate with all our force. The situation, therefore, is grave despite the apparent lull in fighting, and warrants a complete concentration of effort in this direction immediately. Equally as important as armed preparation is the development of the *will* of the people to fight, without which no preparation can be started.

A great responsibility lies on the shoulders of the armed forces for whom the alternative to fighting is death. Even the lack of resources is no excuse for them not to fight, for now they are fighting for a cause—for the honour of their mother-land. They have, however, the right to expect from the nation the very best of the country's efforts to support them.

Where there is no vision, the people perish.

SPECIAL FORCES FOR NORTHERN FRONTIERS

BY MAJOR V. R. RAGHAVAN

EACH theatre of warfare has certain special features which invariably affect the organisation and employment of the forces in that area. The operations in Burma, North Africa, and Italy during World War II clearly show the effect terrain and weather conditions have had in this respect on the forces that operated there.

Conditions in our northern frontier region are in many ways unique. These unique conditions have been only too vividly brought into focus during the Chinese aggression during October-December 1962. Limitations and shortcomings in the organisation of our forces in the region have since been overcome of late.

Nonetheless, the peculiarities of the terrain in the northern frontier region are such that the problems of unfamiliar terrain, acclimatisation, knowledge of and cooperation with the local inhabitants will be difficult to overcome by our regular forces in the likely event of switching areas of operations due to enemy pressure elsewhere on the frontier. These difficulties will also manifest themselves during the peace-time when the turn-over and relief of troops takes place at regular intervals.

It is felt in some quarters that the answer to these problems might be found in raising a specialist force and stationing it permanently in the frontier region. It is proposed to discuss in the succeeding paragraphs some of the ways in which this force could be of use, the broad nature of its composition and factors that will govern the raising of such a specialist force.

The mention of special forces to operate in the northern frontier region would in many cases cast the minds to operations in the North-West Frontier Province (NWFP) of the undivided India. That was where Indian Army's famous Frontier Force regiments and many other fine regiments had fought in a predominantly mountainous area. However, such a comparison between the NWFP and our northern frontier region would lead to wrong conclusions due to differences in conditions prevalent in the two areas.

The first difference is that of terrain. Though both are mountainous, the Himalayan frontier is in large parts snowbound most of the year, whereas NWFP had seasonal snowfall in certain regions only. Snowfall by itself did not have any effect on the operations in that region, neither did it affect the administration in the operations to the extent it does in our northern frontier regions. The average altitudes of the areas of operation in these

regions differs greatly. Whereas in the NWFP troops operated without any extreme difficulty, the same cannot be said of our northern frontier region. Even the induction of troops in the forward areas has to be phased to allow for altitude acclimatisation. Indeed, our army can claim to be operating at the highest altitude in the history of land warfare. As if it was not enough, the vegetation differs greatly from place to place in the northern frontier regions. From dense tropical forests in the lower hills to the absolutely bare plateaux situated at lofty altitudes of rarefied air, a whole series of differing climates confront our forces.

The second difference is that of the local inhabitants in the two areas. Whereas the tribals in the NWFP were intensely nationalistic, never accepted the British rule easily, used modern (under those conditions) fire-arms (even manufacturing their own), were a match to the best the British and Indian regiments could produce in the art of use of weapons and minor tactics, and knew their country like the palm of their hand, the inhabitants in our northern frontier regions have a different story to tell. Although in every respect a part of our heritage, they are yet to be fully aware of the meaning of an independent, united nation having the responsibility to defend its freedom and way of life against an outside power.

Lastly, the difference in the political aims of operations in the NWFP and our northern frontier region will have an important bearing on the forces operating in the latter. While in the former operations were directed wholly against the local inhabitants with a view to maintaining law and order and political control in an area nearest to the Russian territory, operations in the latter will be against an outside power which carries out aggression against us.

Under such circumstances, the presence of a tribal population in the northern frontier regions should be made a positive asset to our operations. The regular forces, although now attuned organically to conditions of terrain in the northern frontier region, cannot be expected to work in conjunction with the local population. They will be operating with definite military objectives. The use of the local population either directly or indirectly can only be made by a force which is unencumbered by a labyrinth of procedural and administrative difficulties, has detailed knowledge of the area and its population, in addition to having the confidence of that population.

It would be worthwhile examining the ways in which such a special force could be used. It must always be remembered that the force will have to be trained to do its special task. It should, therefore, be trained for, and used in, a definite capacity. Although such a force will be very versatile in its performance, the temptation to attribute to it every ability and therefore assign to it every unorthodox problem should be guarded against.

One of the primary tasks of this force would be to acquire the fullest possible knowledge of the terrain. In regular forces detailed knowledge

of an area generally means the knowledge of all existing tracks and information of villages with their capacity to provide porters and ponies. The special force, on the other hand, should know by personal reconnaissance every possible approach to features of military importance, various river crossing points, places affording observation over wide areas, likely areas for deployment of artillery, suitable areas for bases and dumps, and areas that can easily be converted into dropping zones and aircraft landing grounds. They will mark trails on ground over which although normally no traffic ever moves, our own lightly equipped forces could be guided for outflanking actions as also to carry out raids and diversions. Having such detailed knowledge of the area, a handful of such special force men could easily guide large forces over and through areas considered impassable by the enemy.

This force could, by its special knowledge of the area, provide an effective screen of scouts and obtain detailed information of enemy location and strength. Small detachments of this force, equipped with wireless, when left in enemy occupied areas can provide vital information regarding enemy concentration and movement. The same detachments can act as guides to our forces that achieve a break through and penetrate into enemy occupied territory. Their presence in enemy-held territory would cure many a commander's nightmare of lack of information regarding the enemy.

Such a force can also be used to contain the enemy on a flank and keep him engaged while the regular forces can deal the death blow at the chosen point without having to deplete their strength. Detachments of the special force could infiltrate into enemy-held areas and cause untold confusion by their jitter tactics when combined with the regular forces' operations.

With the help of selected and loyal helpers from amongst the local population special force detachments can organise disruptive and destructive activities that will hinder enemy's maintenance of forces and compel him to employ a part of his force to deal with such guerilla gangs. By their presence in enemy-held territory these special force detachments, if they have achieved the necessary sharing of confidence with the local population, can at least spur them on to carry out passive non-cooperation if not active hostilities against the occupation forces. It must however be admitted that this task is not as easy as it seems to state.

Although a special force does seem an answer to the recurring problems of operations in the northern frontier region, there are limitations which are inherent in all such special forces. These limitations are a sobering factor when one tends to be carried away by the supposed omniscience of the special forces. It must always be remembered that special forces alone can never win wars. By themselves, special forces cannot defeat regular forces in battle. It is only when their efforts are directed towards the furtherance of regular forces' objectives do they succeed in more than substantial measure and achieve the reputation of being able to achieve every military aim set to them. History provides numerous examples of

successful special forces. We should however not forget the lesson these examples show indirectly, viz., these successes were scored because the special forces were either specially suited or specially trained to perform their tasks in certain given circumstances. One set of special forces succeeding beyond measure under one set of conditions are not likely to repeat the performance under a different set of circumstances.

It would, therefore, be of prime importance that its role and tasks under existing circumstances are unequivocally decided upon. That step would decide its composition and the type of training to be imparted to it. Training of the force to fulfil a specific role should not present any problems. Composition of such a special force on the other hand will provide some alternatives.

Raising of the special force from amongst the local inhabitants of the northern frontier regions would seem an attractive proposition to many. It has the advantages of the locals having detailed knowledge of the area, and having their roots in the soil where they are going to operate. They would also have the inspiring cause of defending the land of their birth. On the other hand, the state of development of such locals is not commensurate with the standard of minor tactics, weapon training and military initiative that will be expected of a special force. Although they can be trained in these, it will take a long time. These inhabitants are not used to work in the organised and disciplined manner of a body of trained men. They are traditionally too strongly attached to their land and their tribe, and their holding together under military leadership, while undergoing privations and hardships will take a lot of drilling into. Moreover, special forces raised from tribal levies will not be able to operate beyond their own tribal areas due to the tribes' mutual suspicions and traditional differences.

The other alternative would be, either to raise the force from amongst volunteers in the regular army, or to convert some existing regular units into special force units. Both these methods have been successfully tried out during World War II. Under the existing conditions in the northern frontier regions where the special forces' role would be as important as during war, either alternative will have some drawbacks.

One drawback would be of turnover of personnel. Periodical turnover of personnel is absolutely essential to enable them to have a chance of living with their families. No amount of inducements in terms of professional betterment, financial gains, and other attractive service conditions will ever willingly draw people to a vocation where they perpetually have to stay away from their families. Neither can we possibly have a special force of Spartan bachelors. This turnover of personnel, if affected, reduces the potential of the special forces by bringing in new men every now and then, and thus breaking the continuity of contact and physical and mental acclimatisation.

If the special force has to work in conjunction with the tribals in the northern frontier region, such turnover will be quite damaging. Tribals have greater faith in men and their promises than in ideas and ideals. Only by continuous close connection with the tribals can their confidence and cooperation be obtained, and personal acquaintance plays the most important part in this give and take.

There would be other drawbacks, like the inability of the special force to merge with the locals of the area under enemy occupation. In some cases the racial and ethnological characteristics of the special force personnel may not altogether suit the conditions in the northern frontier regions.

All these drawbacks do not necessarily mean that a special force cannot be created under the existing circumstances. They only emphasise the point that only when a definite aim and priority of tasks for the envisaged special force are laid down can the composition, training methods and equipping of such a force be worked out with clarity.

Special forces have a knack of creating a cult of their own. Supreme confidence in their ability and a fierce pride in their *esprit de corps* which their special role brings about is always admirable. To say that without special forces regular forces cannot succeed would be a folly. As a great captain of war wrote, "Armies do not win wars by means of a few bodies of super-soldiers, but by the average quality of their standard units." Special forces, it must be remembered, are costly in terms of money and material, and if these forces do not have a direct bearing on the furtherance of the aims of the regular forces, or if these forces do not give worthwhile returns for the physical and financial stakes put into their creation, it would be a folly to create them at all.

There must be no tendency to excuse incomplete readiness for war on the premise of future acquisition of trained personnel or modernized material...personnel shall be trained and rendered competent...existing material shall be maintained and utilized at its maximum effectiveness at all times.

—Admiral Ernest J. King, Commander-in-Chief,
Atlantic Fleet, U.S. Navy

ADMINISTRATIVE COVER

BY BRIGADIER R.S.S. KOHLI

INTRODUCTION AND STIPULATIONS

EVEN at the best of times administrative resources are seldom more than adequate to meet the requirements. These days, when the demands on our limited administrative resources are so many, the state of sufficiency is not likely to be attained. It behoves on all those who have a call on the Army's administrative Services, to make their demands sparingly and to realise that a demand met in favour of some one must result in taking the supply away from another whose need may be greater and whose task may be hampered thereby.

It has been generally accepted that the detailing of an assignment is done by the operational staff of a Headquarters and, thereafter, the administrative staffs are required to produce the necessities for carrying out the assignment. More than one great captain of war in military history has remarked that it takes little ingenuity to figure out where one would like one's forces to be deployed to the best advantage, but it requires a lot more imagination and initiative to ensure that the forces reach the area of deployment and are sustained there for the duration of time required to fulfil their purpose. Where there is a state of plenty it is right that the task assigners should speak first and the administrators should follow, but when this state is not there, it is but logical that the administrators should speak first and the task assigners speak only within the limits permitted by the administrators. Then, again, when the task assigners accept or are compelled to accept a diversion of administrative resources, they must at the same time realise that a revision of the assignment is inevitable and must be done to conform to the even more restricted limits which they, not the administrators, have created.

Several commanders have refused to be dictated to by administrative limitations and have yet achieved the tasks set by superior authority or by themselves. This statement would appear to contradict the dictum of giving ample consideration to the views of the administrators, but on closer scrutiny it will be seen that this is not in fact so. The administrative resources required by a commander were available somewhere and it was by the use of his forceful personality or overriding influence that that commander was able to obtain those resources. The logical result was that the poor unfortunate Peter having been denuded by the efforts of Paul was left in a state of semi-inactivity, or even compelled to take retrograde steps. But here, too, it was almost invariably accepted by the task assigners and planners that Peter's state of inactivity was inevitable. The complications

arise when Peter's state of inactivity having been tacitly created is thereafter not accepted as a fact.

It is almost axiomatic that when dual control is exercised over the operational forces assigned to a particular task, the completion of the task becomes increasingly difficult, if not altogether impossible. What applies to the operational forces applies more to the administrative resources; in fact dual control over them must inevitably produce a state of confusion. Clear-cut command and control is essential if administration is to keep abreast of operations.

ILLUSTRATION

To illustrate what has been stated above let us attend as spectators an imaginary conference which has been called by an imaginary Corps Commander to examine the problems which an imaginary harassed Divisional Commander has brought for obtaining decisions. Present at the conference, in addition to the Corps and Divisional Commanders, are the senior operational and administrative staff officers of Corps Headquarters. All these officers are assembled in the Operations Room of Corps Headquarters and the Corps Commander opens the conference.

Corps Commander : Now, then, Omar. I understand you have several matters which are worrying you and it is to deal with them that we have gathered here today. But before you start let me just say that we are fully aware of your problems and we have done all we can to make them known to higher authority. However, this may not give you the satisfaction you want so we will take each problem in turn and try to arrive at some decision. Just to make sure that we are all on the same net, I will ask the Brig I/C Adm to give you the administrative picture.

Brig I/C Adm : Sir, as you know the Corps has no administrative resources as such. The administrative replenishments of our Divisions are delivered, by an agency beyond our control, at their very door steps. In this regard the main task of your administrative staff at Corps Headquarters is to exercise vigilance and thereby keep a watch on the administrative build-up. Many of our posts as at present existing have to be maintained by air; we get air tonnages allotted to us by higher authority who think nothing of taking away portions of what they have given and that too without any notice or warning. Such action invariably results in completely dislocating planning carried out by us, the Divisional Headquarters and by our Rear Air Supply Organisation. But in the matter of air maintenance we exercise more control than we do on the maintenance by the land routes.

Corps Commander : So you see Omar, the picture is not a very bright one, but keeping it in view now shoot with your problems.'

Divisional Commander : Strangely enough Sir, my first problem is regarding air maintenance. I must emphasise with all the force at my

command that air tonnages allotted to my Division must be utilised at my discretion, and there must be no interference from higher authority on what those tonnages are to be used for.

Corps Commander to Brig I/C Adm: What have you got to say on that?

Brig I/C Adm : As a general rule, it must be accepted that the Divisional Commander and his staff have complete control over the air tonnages allotted to them. But, Sir, the most important commodity which has to be carried to our air-maintained posts is rations and fuel. So long as the shooting war does not start all other commodities must take second place. If the Divisional Commander intends that we, that is your administrative staff, are not to prompt Divisional Headquarters into ensuring that sufficient stocks of rations and fuel are built up, then his wishes will be respected. But it must also be accepted that Corps Headquarters must not be made recipients of panic signals which paint pictures of a hard-pressed garrison living on grass or other local vegetation to sustain themselves.

Divisional Commander : If I may be permitted to answer that, Sir, may I say that the Brig I/C Adm is exaggerating when he speaks of garrisons living on grass? The only things that live on grass in my divisional area are animals. But I accept the proviso as stipulated by the Brig I/C Adm so we can take it that, that point is settled. My second problem is also concerning air maintenance. How is it possible to stick to the operational plans when the air maintenance does not materialise in accordance with what has been planned?

B.G.S. : With your permission Sir, may I interrupt at this juncture? The plans we made initially have been changed repeatedly to conform to the administrative cover provided. In this regard practically every letter and signal which has been sent to our divisions on the subject of air maintenance has been drafted by the Brig I/C Adm and myself jointly. It will be seen that practically every such communication contains references to both operational and administrative issues.

Corps Commander to Brig I/C Adm : Now then let us have your side of the story.

Brig I/C Adm : Sir, there are several reasons for the air maintenance not keeping to the forecasted schedule. Some of the more important ones are as follows :—

- (a) There is no air effort allotted to us; we are merely told what tonnages the air effort in our area is expected to deliver to us. We have made several efforts to get an integrated air effort but the net result is too well-known to require repetition. Suffice it to say that we are really no better off than we ever were.
- (b) When a target for a particular month is not achieved by the air effort, a backlog results. When targets for subsequent months

are also not achieved the backlog grows like a snow ball and has eventually to be ignored.

- (c) The climatic conditions are unpredictable and not even past experience provides a basis for accurate planning.
- (d) As I have mentioned earlier, portions of tonnages allotted to us are quite often taken away and given to some other organisation which, though working in our area, is not under our command and control. This means that as there is no way of increasing the target tonnages, we merely suffer short-falls. But, as the BGS has pointed out, where we reduce the administrative cover we also make similar changes in our operational plans.

Corps Commander : Yes ! All I have to add here is that I have made personal efforts to get an integrated air effort but all the credit I have got is latent and indirect accusations of trying to build my own empire. But Omar, are you satisfied that you are making all possible use of other stores-carrying agencies?

Divisional Commander : Sir, by the other carrying agencies, I presume you mean my mechanical and animal transport. In so far as the former is concerned, it is employed to capacity. Mark you Sir, many of the roads in my area can be used only by lighter vehicles and consequently my requirements of such vehicles are far in excess of what I have. I have made repeated demands to your Headquarters for more of those vehicles but so far nothing has materialised. As for animal transport, I had two AT Companies in the forward areas, and the next thing I know is that your Headquarters is advising me to withdraw them, which I have now done. Before we finally leave the aspect of air maintenance may I just make another suggestion? All along we have been stressing the point that the Air Force because of their manifold commitments are at times unable to meet all our demands. Has anybody thought of impressing some civilian aircraft into our services?

Corps Commander : I will deal with your last point first. We have tried to convince higher authority that the matter of air maintenance in our area, is an emergent one and should be tackled as such without personalities, their reputations and similar considerations being brought in. As you can imagine, I have made myself quite unpopular on this score, so, the less said the better. Coming now to the question of mechanical transport, the Brig I/C Adm was showing me our total transport requirements and the figure is quite phenomenal and with the best of intentions I cannot see anybody producing that number of vehicles for us. So generally speaking we shall have to make do with what we have. I am intrigued to know about your having been coerced into withdrawing your AT Coys. Do you (to the Brig I/C Adm) know about this? After all it was only the other day that we were able to get field scale of rations sanctioned for the animals in the Corps area.

Brig I/C Adm : Sir, the use of AT upto an optimum turn round is an economical proposition; beyond a particular distance AT ceases to be

a productive agency. The case which the Divisional Commander is referring to is an example of this. The animal transport was carrying forward approximately 40 tons a month, but to keep these animals fed meant the taking up of approximately 75 tons of air tonnages. It was for this reason that we advised the withdrawal of the animals to where they could be maintained by the land route. Apropos of our transport demands; you may know, Sir, that a portion of our demand has been accepted as inescapable though what this means in terms of transport materialising I really cannot say.

Corps Commander : Yes, everybody has their own ideas on what is inescapable. The number of times I have heard this word used, makes one wonder why it is the Army has not been reduced to the state of beggars. Anyway, Omar, having been deprived of your animal transport, you will really have to make the fullest use of local porters. I understand there are plenty in your area.

Divisional Commander : Yes Sir, there are plenty of local inhabitants who would be only too willing to work for us. But here also I am banging my head against a brick wall. For reasons best known to themselves the local civil Government exercise a most tight-fisted control over the locals. This applies equally to local animals. Do you know, Sir, I have practically to go on my hands and knees trying to obtain pastures for animals which I had engaged without reference to the local civil head? You mentioned something, Sir, regarding how long it would take for our inescapable vehicles to materialise. In my area there are rows upon rows of brand new vehicles which are lying idle. Why can't we have some of them?

Corps Commander : I wish you could Omar, and I also wish that I could distribute some of them all round the Corps. But those vehicles are for the fulfilment of a higher purpose and must remain forbidden fruit as far as we are concerned. Any way we appear to be straying from the point. We seem to have exhausted all the available local carrying agencies, at least those that are within the bounds of our planning. You will have seen that in a recent signal issued by my 'Q' staff, we have scaled down the holdings for air maintained posts. I don't mind if even those scales are further reduced, and you and your staff, who have a much better picture of the situation, are at liberty to make any recommendations in this regard. We cannot obviously have a dangerously small margin, but I myself feel that no further scaling down will be necessary nor will it be necessary to withdraw any more of your troops. Now then what is your next problem?

Divisional Commander: Sir, I have an operational task and all my energies are, quite rightly, being concentrated on preparation for that task. Anything which diverts the attention of my staff or myself is, I consider, unprofitable effort. I have two specific diversions in mind; one is the concluding of supply contracts and the other is the supervisory control, I

am being asked to exercise over the Rear Air Supply Organisation. Regarding the supply contracts; why, Sir, can't your ST staff conclude or negotiate our supply contracts for us?

Corps Commander: Well, frankly I don't know, but I have no doubt my DDST could be able to answer you. As he is not here, let us see what you (*to the Brig I/C Adm*) can tell us about this?

Brig I/C Adm: The answer is quite simple, Sir. Firstly, although you have a DADS (Contracts) you have not so far been given any financial powers for concluding contracts. We have taken up this matter with higher authority and I hope your financial powers in this regard will come through pretty soon. Secondly, I respectfully submit that neither the Divisional Commander nor any members of his staff are concluding supply contracts, for he also has no financial powers in this regard. But I hope that he will be given financial powers for concluding supply contracts as his case has also been taken up. What the Divisional Commander probably means is that he does not wish to keep a watch on the operation of contracts.

Divisional Commander (interrupting abruptly): No Sir, I do not mean that; why, it is only the other day my CASC concluded a contract for the carriage, by local animals, of rations and other commodities, across an obstacle which could not be negotiated by any other way.

Brig I/C Adm: If I may be allowed to continue, Sir, I apologise to the Divisional Commander. The contract he mentions is not strictly a supply contract, but rather a transportation contract, which requires little formalities and can be paid for from the Supply and Services Imprests which have been made available to practically all units. Actually, Sir, with due deference to the Divisional Commander, I may say that such transportation charges should seldom be the worry of the CASC. Composite Platoon Commanders and even Infantry Units should be fully capable of coping with such administrative matters. As for the actual supply contracts in our area, they are concluded by the same authority which delivers supplies to our Divisions, and which is not under our command. Contracts forward of the jurisdiction of that authority will have to be concluded by our divisions. Those that are beyond their financial powers will be concluded by your ST staff.

Corps Commander: So much for your problem of contracts. Now what was the other point? Oh! yes, I remember—the question of vigilance over RASO. Frankly I don't see how you come into picture but I have no doubt you (*to Brig I/C Adm*) have some good reason for saddling the Divisional staff with this responsibility.

Brig I/C Adm: The establishment of our RASO is only a fraction of what it should be; it has not its full complement either of personnel or transport and hence it is not able to discharge its responsibilities without assistance from other sources. Even if we discount this, it is but right

that representatives of units who receive supplies and other commodities by air, should see that everything is all right at the despatching end. Really this is not a very big commitment. The Division has a fairly representative rear party not very far from where the RASO is located. It is personnel from this rear party who are being asked to keep a watch on what is being packed and loaded on the aircraft. Amongst other things, this procedure provides for an independent check on the quality and quantity of air maintenance. Once again, with due deference to the Divisional Commander, I would have thought that the Divisional units dependent on air maintenance would have welcomed this opportunity of having a say on what and how much is sent in and also that the stores supplied are upto specifications.

Corps Commander: There you are Omar, you have your answer. If you do not want to accept this commitment, you have every right not to do so, but then you must also accept that the administrative staffs cannot entertain any complaints regarding air supplies from your forward units dependent on air maintenance. Now, then, what is your next point.

Divisional Commander: As you know, Sir, there are several units of the non-regular forces under my operational control, but administratively I exercise practically no control over them. My staff have laid down certain administrative minima, which posts manned by these units must have what, if they are not to become a liability during an emergency. Try as I may, I have not been able to get the requisite stocks built up.

B.G.S. : Sir, May I say something here? The picture as painted by the Divisional Commander is fully known to us and we have been after the authorities who control the administration of those non-regular forces to build up the stocks at their posts to the scales laid down by us. What those authorities seem to think is that if we exercise operational control over those forces we must automatically exercise administrative control at the same time. The argument is a logical one, but unfortunately this is not acceptable to the higher authorities in the Government.

Corps Commander: I can see the argument. *(To the Brig I/C Adm)* I thought we had decided to plan on our providing the administrative cover for the non-regular forces under our operational control.

Brig I/C Adm : What you say is correct, Sir; we have in fact, taken up the whole case with higher authority. But there are two aspects of which you should be made aware. These are as follows :—

- (a) The cost of the administration of the non-regular forces is not at present being charged by the Ministry of Defence to the Ministry controlling the non-regular forces. In the absence of such charges the Ministry of Defence are not likely to agree to any administrative cover for those non-regular forces.
- (b) Quite a lot of stores and equipment provided to the non-regular forces is not of army specifications. As you will appreciate, Sir, the decision to change over to our patterns and for the

Ordnance to take extra provisioning action must be taken at the highest level.

About two things we are certain; firstly, that in the event of an emergency the present system of administering the non-regular forces will not work; secondly, we cannot possibly take on the administration of those non-regular forces with our present resources. The financial implications of our proposals are, therefore, sizeable ones and I cannot see a speedy solution to our problems.

Corps Commander : Now then Omar, what is your next problem?

Divisional Commander : Sir, my next and final problem is the evacuation of casualties from posts which are inaccessible by any means other than light aircraft and helicopters. I have had several air strips made and also helicopter pads. All that I need to be assured of is that the necessary aircraft and helicopters to carry out the evacuation will be available to me.

Corps Commander : Now, this is a matter to which I have given my personal attention and I can therefore give you all the details. I have taken up, at the highest level, the provisioning of helicopters specifically for the air evacuation of casualties, but so far my efforts have not produced the goods. It is all a matter of foreign exchange and the interminable negotiations with a foreign power to acquire the helicopters. I have no doubt that eventually we shall get our helicopters, but until that happens you will have to make the best of our meagre resources. The Air Force are also alive to the problem and they are doing their damndest to keep their helicopters and light aircraft in a serviceable condition. To assist them in doing this, I have placed severe restrictions on the use of these aircraft and helicopters for communication purposes.

Divisional Commander : Sir, why is it that we always get low priority in acquiring new equipment which is urgently required by us? Now I was talking to a fairly responsible fellow who belongs to the same organisation which has been given the large number of brand new vehicles to which I have referred earlier on. He assured me that his organisation hopes soon to be in possession of several high-ceiling helicopters with payloads far in excess of what the Air Force has at present. It seems to me that we are getting a raw deal, after all, operational needs must come before everything else.

Corps Commander : I could not even begin to answer your query. All I know is that such matters are considered and decided upon at the highest level and if the powers that be decide that we, who have the task of defending our country from aggression, are to be given a lower priority, then we must accept that decision in good grace. 'Belly-aching' will not get us anywhere but will merely make us thoroughly unpopular in the bargain. Now, Omar, if you have nothing else, I will get on with some rather urgent work.

Divisional Commander : No, Sir, I have nothing else. But may I just say how relieved I feel at having fully apprised you of my difficulties and received a most sympathetic hearing from you and your staff? Now I can go back with the sure knowledge that my problems are receiving all possible attention and that my difficulties are fully appreciated.

Corps Commander: OK, then, Omar, Good luck to you and thank you. (*To the BGS and Brig I/C Adm*) Thank you also. Please see the Divisional Commander is comfortably accommodated while he is at Corps Headquarters.

CONCLUSION

The above illustration has brought out the following points:

- (a) Any decrease in the administrative cover is automatically reflected in operational planning, and that both operational and administrative planning are done concurrently.
- (b) An unintegrated transportation agency does not make for maximum efficiency in the provision of administrative cover.
- (c) Vigilance exercised by the administrative staffs avoids the uneconomical use of transportation agencies.
- (d) Dual control over administrative resources is not conducive to their economical employment ; in fact, conflicting interests may retard the achievement of the common aim.
- (e) Vigilance by the staffs and scaling down of holdings will make for more practical provisioning by the administrative staffs.
- (f) When administrative resources are limited, assistance from, and vigilance by, representatives from the receiving end will help to maintain the quality of administrative cover.
- (g) Operational control over forces which do not possess the minimum acceptable administrative cover is likely to be a liability in the event of an emergency.
- (h) To make the best use of the available administrative resources, it is quite often necessary to lay down priorities for their employment.
- (j) The basic requirements for the administrative preparedness of a country's defence services should not receive a precedence lower than that of the requirements of the other services.

To some, it may appear that too much is being made of administrative cover and it is this and not the operational requirements which are dictating the policy. Perhaps this is true, but history is replete with examples of forces decimated, or even annihilated, because of inadequate administrative cover for the task in hand. No one in his right senses would advocate over-assurance, but sufficiency must be there so that sound planning and execution can follow. What is required is sufficiency to act and not insufficiency so that all that one is capable of doing is reacting, in this case not to an enemy, but to the imponderables of terrain, inadequate road communications and bad weather conditions. An incorrect appreciation of these elements can have but one result—Disaster.

ARMY-AIR CORPS

BY LIEUT. COLONEL S. K. SINHA

INTRODUCTION

The Army must use all modes of transport to achieve mobility. Through the centuries, soldiers have progressively used the horse, the wheel, the boat and more recently the railways and internal combustion engine to this end. And now in our modern air age, it is only axiomatic that the Army must also use air transport. These general assertions call for no argument. It is only when we project this line of thinking to its logical conclusion that we encounter difficulties. Whereas the need for the Army to have air transport is universally accepted, one encounters a spate of objections when one suggests that the Army should have its own air corps. Both the United States and the United Kingdom have already accepted army aviation as a normal feature in the organisation of their field armies. In our case, in the context of our commitments on the mountains, the need for such a corps is greater still.

Before examining the requirements of mountain operations, it would be worth our while to consider some of the arguments advanced against the Army having an air component. It is argued that today we live in an age of specialization. The three Services specialize in fighting in the three elements. Therefore they must not overstep the boundary of their particular element—the Army must be confined to land, the Navy to water and the Air Force to air. Such compartmentalization takes a very narrow view of specialization. Already the boundaries between the three Services overlap. The Air Force has its land elements, the Navy its fleet air arm and the Army flies light aircraft for directing artillery fire. Consequently arguments for any rigid compartmentalization are obviously out of place. We must, however, accept that air power is indivisible and in our case it must be wielded by our Air Force and to that extent, specialization must be accepted. By giving the Army a fleet of small aircraft for its domestic use, we certainly do not violate this concept. It will be no different than the Air Force having its own motor transport.

IT is maintained that the Air Force is responsible for gaining and maintaining a favourable air situation. It would be difficult for any aircraft to operate, particularly in the forward areas with a field army, when we do not have a favourable air situation. This is no doubt true but it applies equally or perhaps more to motor vehicles confined to a pre-determined course ordained by the alignment of roads. It may, however, be said that motor vehicles can move by night but so indeed can light aircraft and helicopters provided necessary preliminary arrangements are made. In any case, the idea behind the formation of an army air corps

is not to make the Army completely independent of the Air Force or *vice versa*. The idea primarily is to make the Army self-sufficient, so that, every time the Army needs an aircraft for its domestic use, it does not have to ask the other Service for it. With the certainty of this need arising with almost routine regularity, there is an obvious requirement for the Army to have its own aircraft.

It is further argued that the training of pilots and maintenance of aircraft are highly technical jobs. The responsibility for these tasks must remain with one Service that is, the Air Force. This reasoning is only partially true. The training of pilots for modern fighters and bombers, as also their maintenance, no doubt, require a high standard of technical skill. However, the operation and maintenance of light planes and helicopters do not require anything like the same degree of specialization. The various flying clubs in the country have begun to give flying licence to pupils after eight to nine hours of flying which in terms of time compares favourably with the training of truck drivers. Similarly, the routine maintenance of these planes presents no insurmountable difficulties.

Yet another argument used is that in the interest of economy and in order to exploit the inherent flexibility of aircraft, their control must remain centralised at the highest level. This control can best be exercised by the Air Force. Moreover, with our limited resources we cannot—unlike the United States or the United Kingdom—afford having an army air corps. These arguments again are not valid. The cost of a light plane in the United Kingdom today is no more than that of a sporting car and is in the region of approximately £ 1,000. The helicopter, of course, costs more. So far as we are concerned, we have already produced light planes both at Kanpur and Bangalore and hope to start the production of helicopters soon. In the light of these facts, the raising of the financial bogey serves little purpose. As regards control of these aircraft, this is normally vested in this regard at the Corps-Tactical Air Centre level. Whether these light aircraft are controlled by the Army at the Corps level or by the Air Force through a Tactical Air Centre makes no difference from the point of view of centralization or decentralization.

Operations in mountainous terrain pose special problems. Surface communications are almost non-existent. Maintenance of the limited communication facilities and provision of new ones are very expensive. Economists can prove with ease that air movement in these areas can be cheaper than surface movement. In this connection it is interesting to note that most of our Gorkha Riflemen going home on leave to Western Nepal find it quicker and cheaper to fly from Nautunwa to Pokhara, than do the journey on foot in seven or eight days. Apart from any financial considerations, the fact remains that surface communications on the mountains are very slow and are very vulnerable to interruptions both by the enemy and the vagaries of nature. Under the circumstances, a field army

operating in such remote areas must inevitably be greatly dependent on air transport. Thus, in such a theatre, air transport for the army becomes a normal routine requirement and not the exception to be made available by the Air Force if and when required.

Having seen the necessity for the Army to have its own aircraft, we must be clear as to what exactly we mean by an army-air corps. Does it mean that the Army would have its own private Air Force? The answer to that is a definite and unambiguous 'No'. The Air Force must continue to wield air power and be responsible for all air operations, both offensive and defensive. Even air transport involving the use of large aircraft of the size of Dakotas and bigger must remain an Air Force responsibility. The army-air corps envisaged should operate only light aircraft and helicopters so as to carry out the manifold local air tasks for a field army. As already discussed when operating in mountainous terrain there is a greater accent on these tasks. These tasks may be as follows :—

- (a) Target surveillance,
- (b) Reconnaissance and liaison,
- (c) Evacuation of casualties from forward areas,
- (d) Limited air maintenance within the theatre, and
- (e) Control of artillery fire.

Even during world war II, light aircraft (Austers) had been decentralized to divisions for controlling artillery fire. These aircraft are now an integral part of a standard infantry division in our Army. Thus, the first step towards the formation of an army-air corps has been taken long ago. Our commitments on our Northern frontiers make it imperative that the next step be not delayed. This step has already been taken in various advanced countries. It is not that the Air Force cannot supply necessary facilities to the Army and therefore the Army must have its own air corps. The point is that this requirement has now become so pressing and frequent, that neither the cause of efficiency nor economy will be served by not having an army-air corps. Under present conditions it is just as difficult for the Army to function efficiently without its own aircraft as for the Air Force without any motor transport. For the very young today, learning to fly is as essential a part of their education as indeed driving a car for our generation or riding a horse for the generation before us. We must not take too narrow a view of the dictum that air power is indivisible and merely for the sake of rigid compartmentalisation deny the Army an air corps.

*War is as much a Conflict of wills and of spirit as of means
Hence, in my judgement, the decisive element in warfare is not the
weapon and equipment but the man who uses the hardware.*

—General Earle G. Wheeler

JAWAHARLAL NEHRU - THE WARRIOR

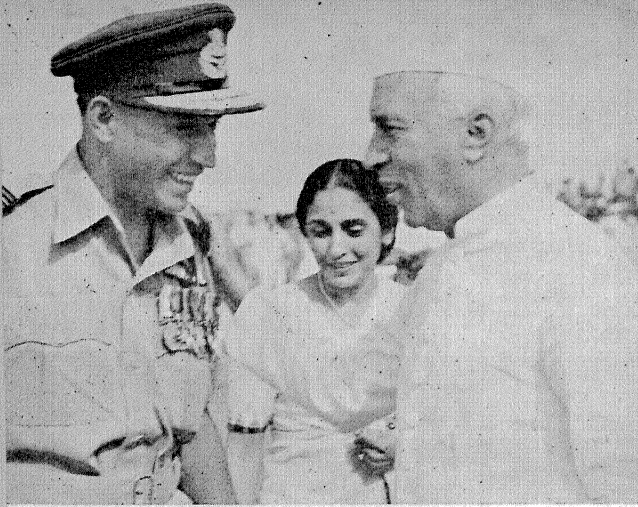
Throughout his crowded life as Prime Minister, Jawaharlal Nehru tried to seize as many opportunities as possible to maintain close contact with the Armed Forces, and particularly the Jawan in the Armed Forces.



Cheering wounded Jawan in Tezpur Hospital, December 1962

The Chinese threat against India is a long-term one and the last five years, and even more so the last three months, have brought out the basic expansionist and imperialist attitude of China. This is a continuing threat to the independence and territorial integrity of India. We cannot submit to this challenge and must face it with all the consequences that it may bring.

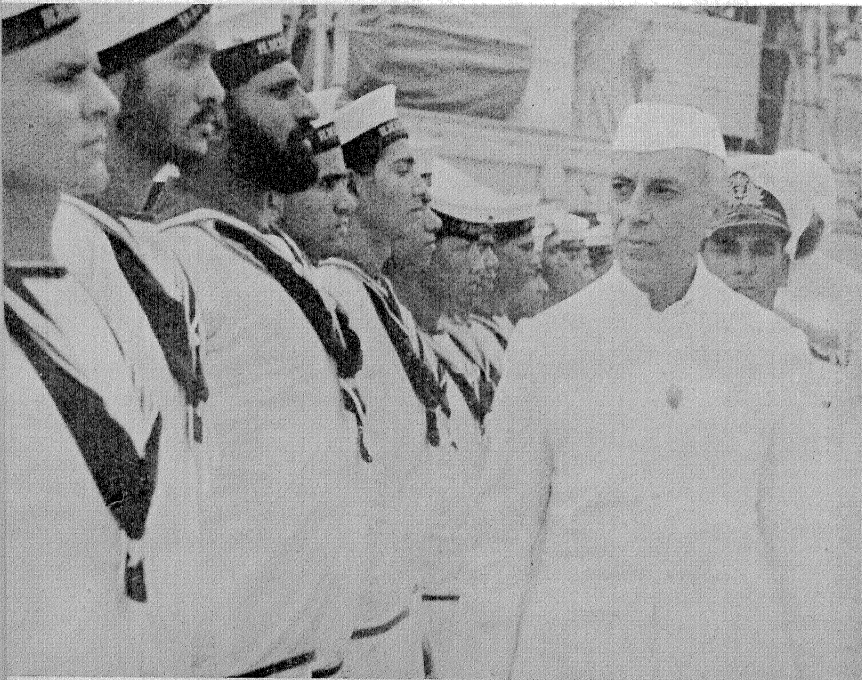
Lok Sabha, December 10, 1962



"I want to know you and speak to you, as it is very necessary that we should understand each other. There should be no distance between the people generally and the Armed Forces".

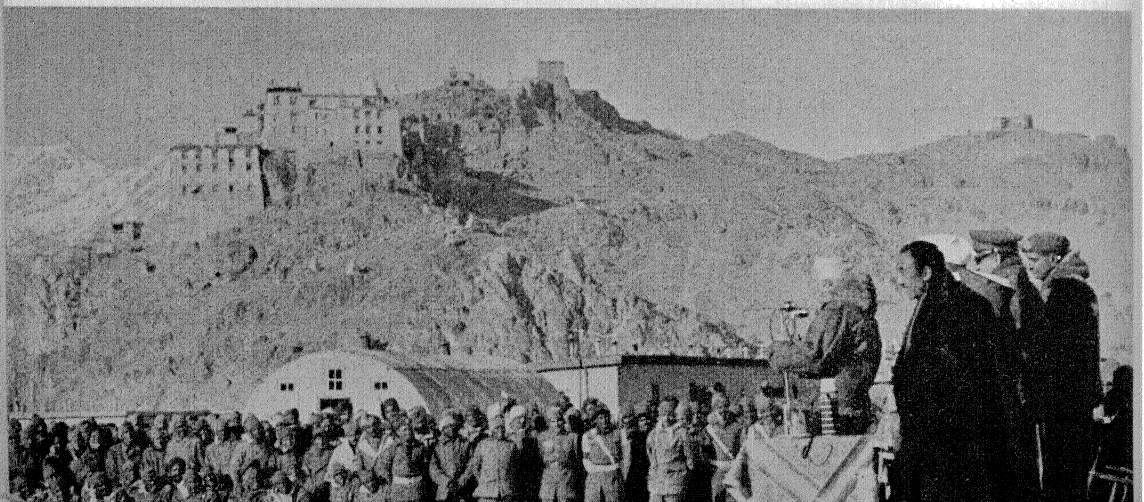
—From an A.I.R. Broadcast to the Armed Forces Personnel, December, 1947.

Felicitating the late Air Marshal Subroto Mukerjee as the first Indian Chief of the Air Staff, April 1, 1954.

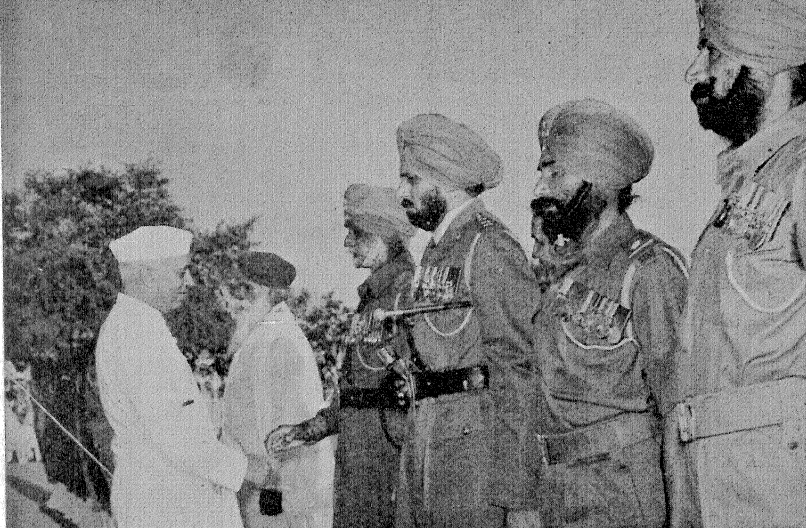


Inspecting sailors aboard *INS Delhi*, India's first Cruiser, September 12, 1948.

Addressing Jawans and Airmen at Leh, December, 1962.



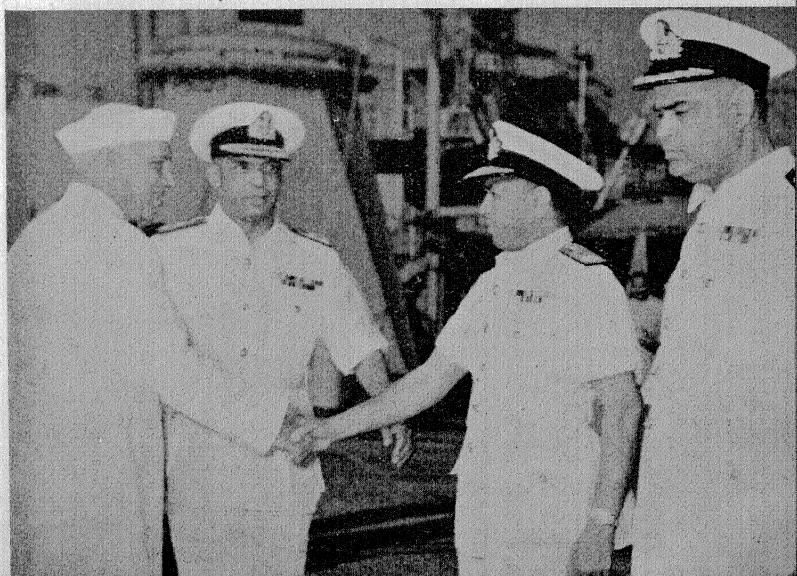
Meeting
the Victoria Cross and
Param Vir Chakra
holders of the
Sikh Regiment,
April 14, 1958.



Presiding over
Army Commanders'
Conference,
Nov. 4, 1963.



With Admirals
R.D. Katari, B.S. Soman
and (then Commodore)
S.M. Nanda
at Naval Dockyards,
Bombay, Nov., 1959.





On board *INS Delhi* during cruise to Indonesia, June, 1950.

Sharing a joke with sailors on board *INS Delhi*, Oct., 1954.

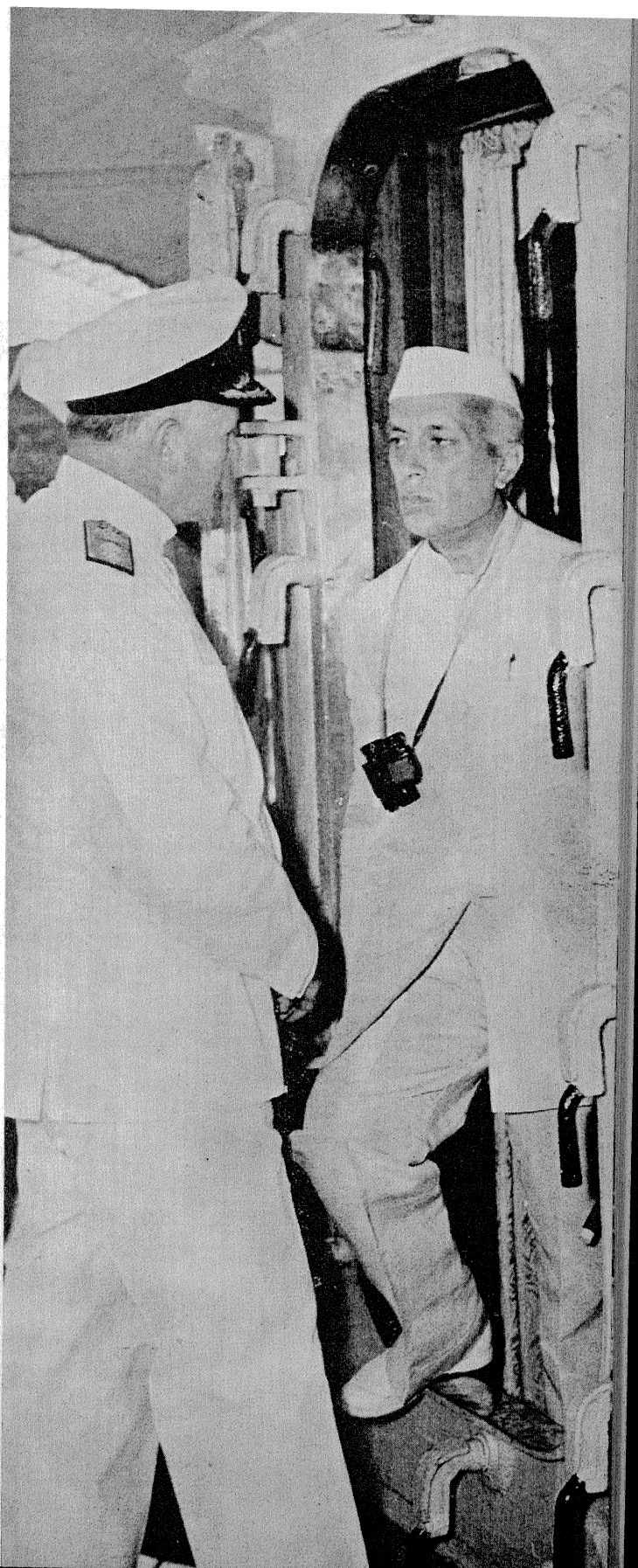


The Navy is not only the bulwark of our security but the men in it are the true servants of the nation, keeping fit in mind and body and ever ready to serve the cause of the nation.

Whenever I have met the officers and cadets and other personnel of our Navy, I have liked them and felt proud of our Navy.

Personally, I would have liked to join the Navy myself had I been young. Life has dealt with me badly and I find myself at an office desk, which is the thing I hate most.

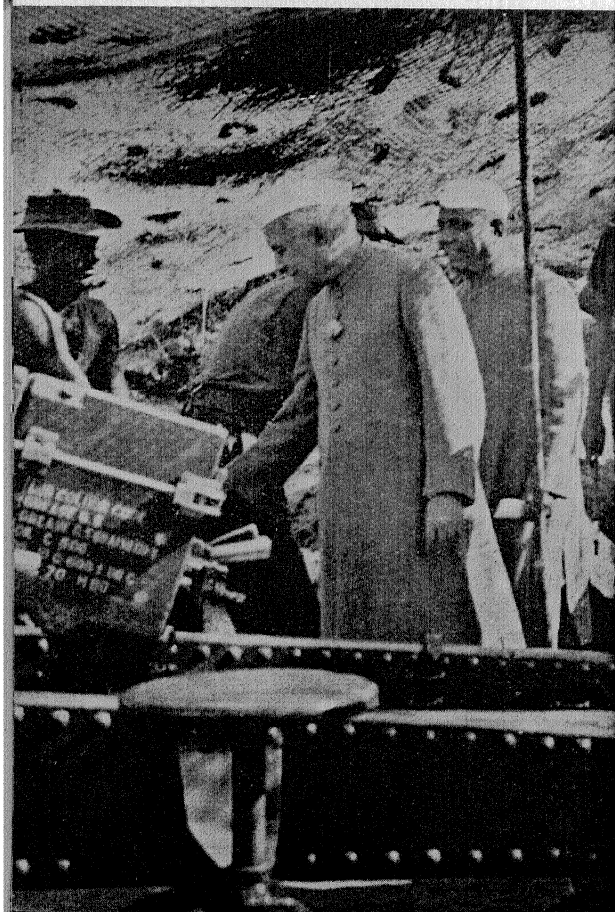
With Admiral Sir Mark Pizey,
Chief of the Naval Staff
on board *INS Delhi*
during the Naval Review,
Bombay, Oct. 10 1953.





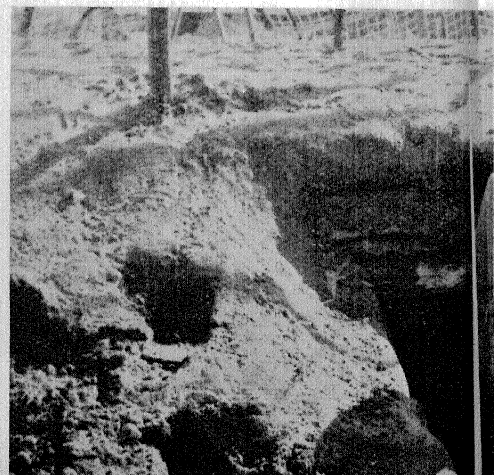
Being cheered by Jawans during his visit to Ladakh.

Inspecting a gun emplacement in forward area in NEFA.



"I came down in some places and met, the men of our Army, Air Force, militia and police. They were camped at various altitudes. The normal journey to them by land may take weeks or even months. Every kind of food or other supplies have to be sent to them by air and our intrepid airmen carry these daily, braving every hazard of these high mountain regions where it is not possible to land except in a very few selected places...I talked to many of our people there and the more I saw of them the more I admired them, for they were as fine a body of young men as you would find anywhere in the wide world. Not a word

Coming out of a bunker during a





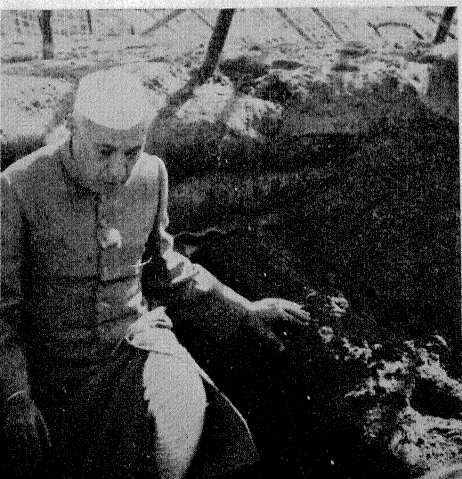
On visit to an Armoured Corps Unit in NEFA.

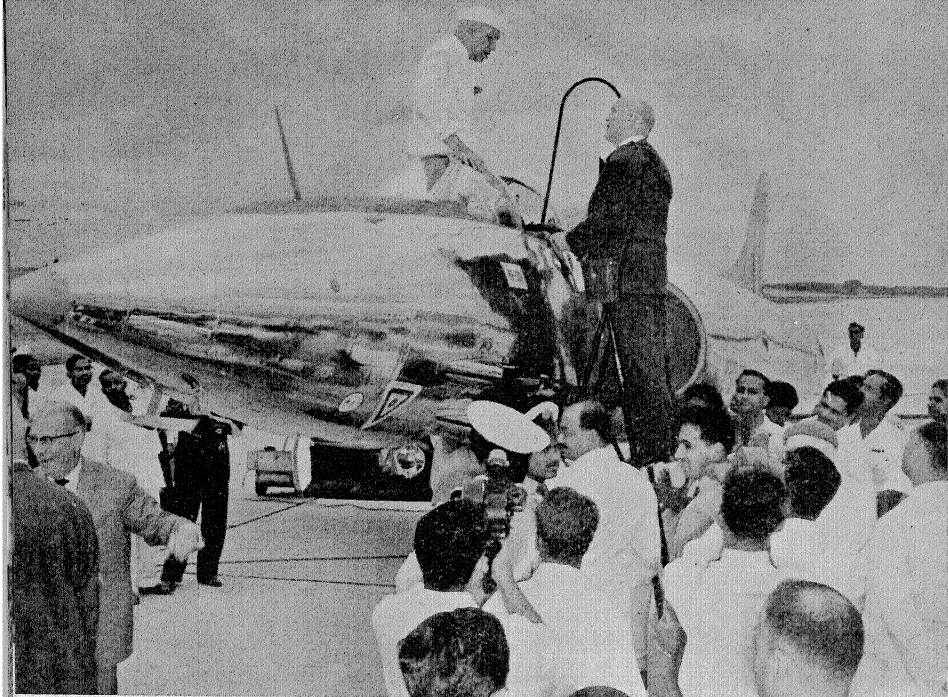
of complaint came from them, and I saw them doing their work with efficiency and good humour. I came back proud of those countrymen of mine who had been drawn from every part of India, even far South, and I felt convinced that they were worthy of the great tasks allotted to them, the defence of India. If eternal vigilance is the price of liberty, as it is, here was vigilance, efficiency, determination and calm courage...

On a tour of forward areas in NEFA.

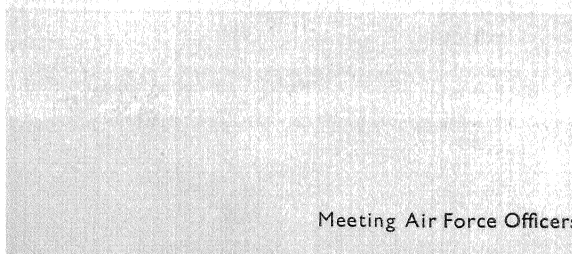
Remember always those countrymen of ours who stand sentinels on those high mountain peaks, relying on us here to back them up and give them all the help and support that we can."

tour of forward areas in NEFA, 1962.



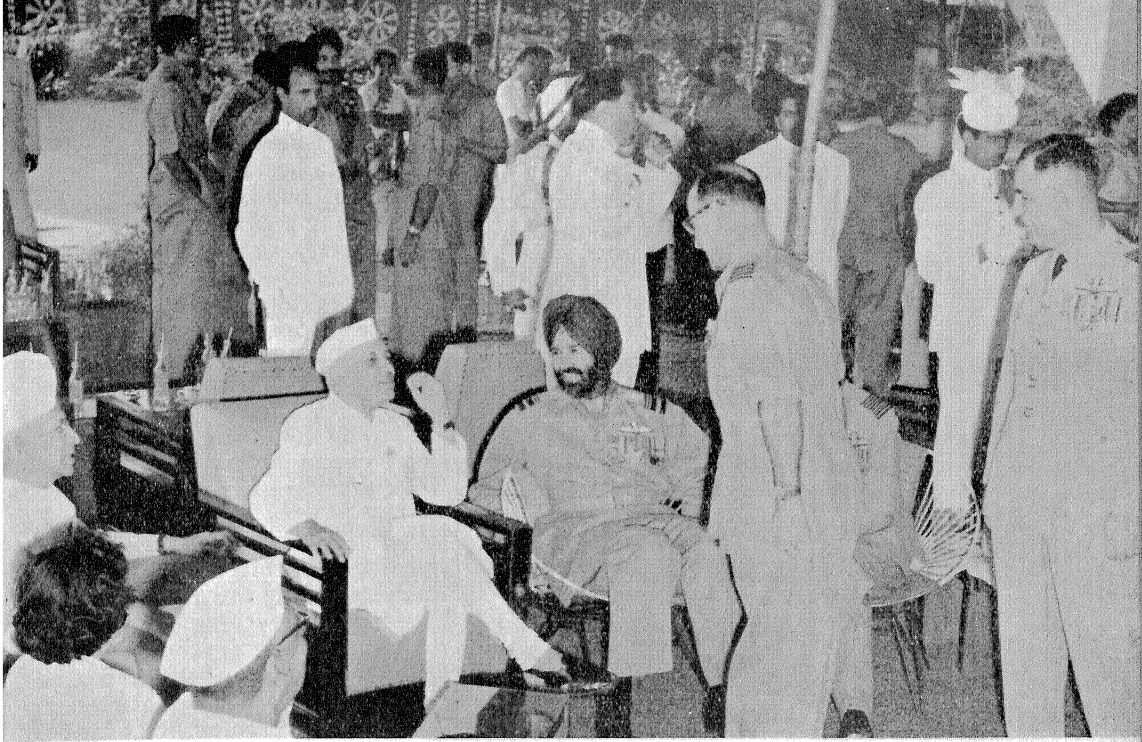


In the cockpit of the supersonic fighter, HF-24, soon after the first demonstration flight, July 28, 1961.



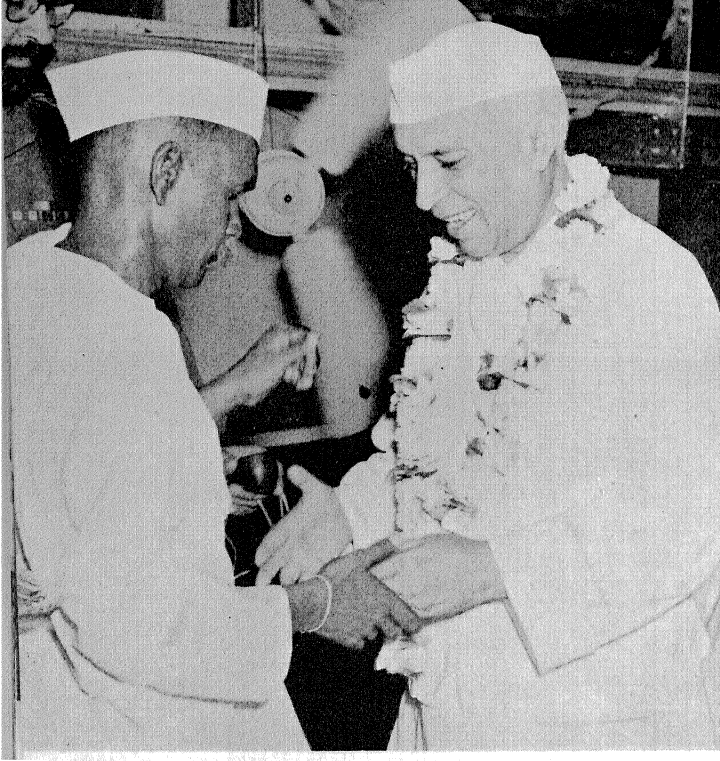
Meeting Air Force Officers in Ladakh, December, 1962.





At the reception of the 30th Anniversary
of the Indian Air Force, April 1, 1963.

"The Air Force grows in age and has now reached its adult stage...I have no doubt that it is becoming more and more self-reliant in design and manufacture...But what is pleasing is the way it has progressed in efficiency and the spirit of enthusiastic and disciplined service...This became evident in recent months when dangers threatened us. Those dangers are not over. We rely with confidence on our Air Force to perform this patriotic task with all the enthusiasm and efficiency for which it has become noted."



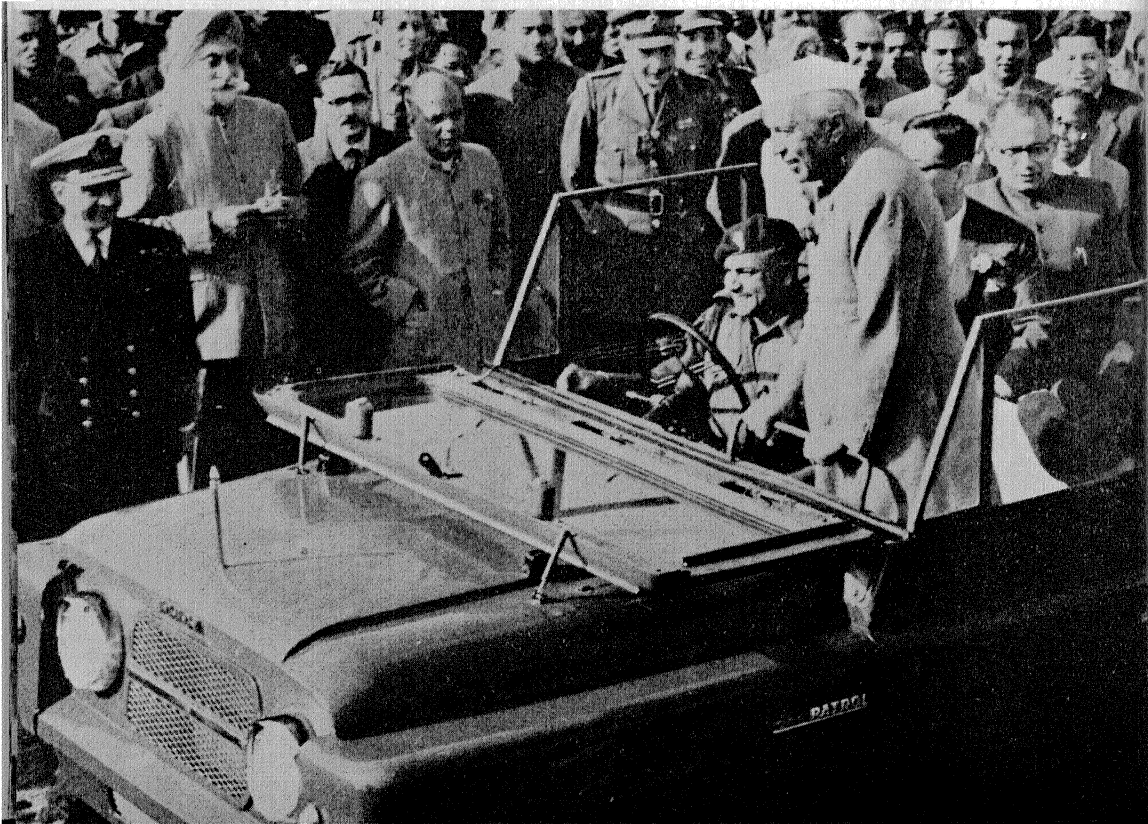
Congratulating a worker at the inauguration of the manufacture of Shaktiman, July 21, 1959.

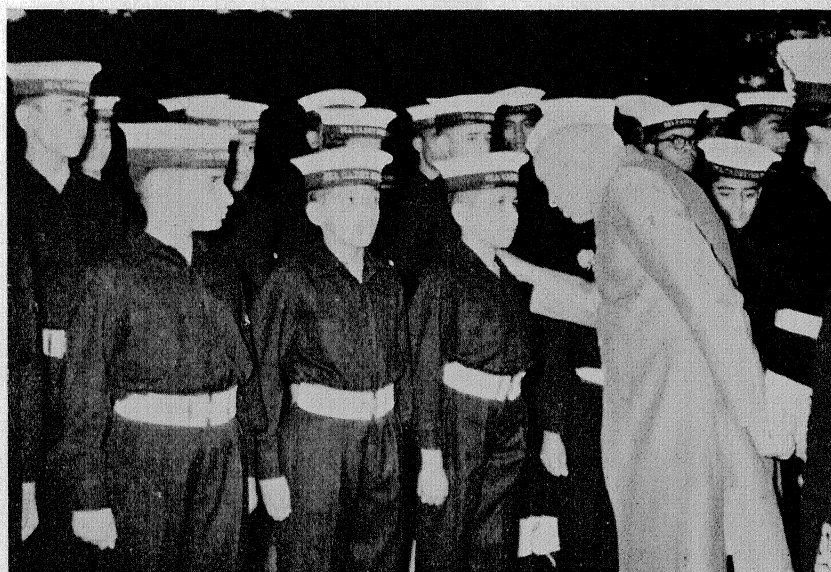
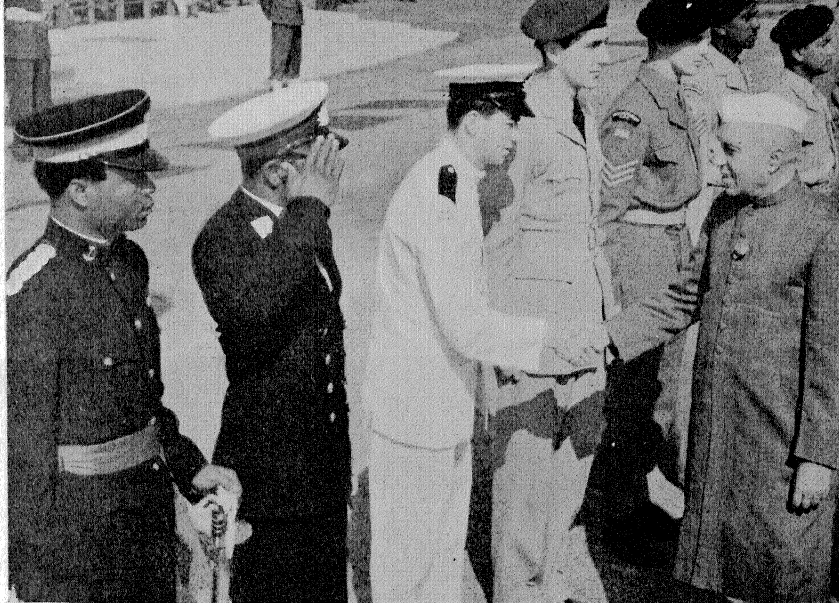
“What is the equation of defence? In what lies the strength of a people for defence?... The equation of defence is your defence forces plus your industrial and technological background, plus, thirdly, the economy of the country, and fourthly, the spirit of the people.

Any defence force that cannot, more or less, provide its own equipment, is not independent. There is no harm in this, except, in a crisis, when the things for which the armed forces depend on others are not available.

In other words, the real strength of a country lies in her industrial resources. The strength of the defence forces and everything connected with them depends on the development of these resources. If not, then defence is just a superficial thing which can be kept up by borrowing money but has no basic strength. ...”

Inspecting the first Nissan patrol vehicle manufactured in the country, Jan. 25, 1962.



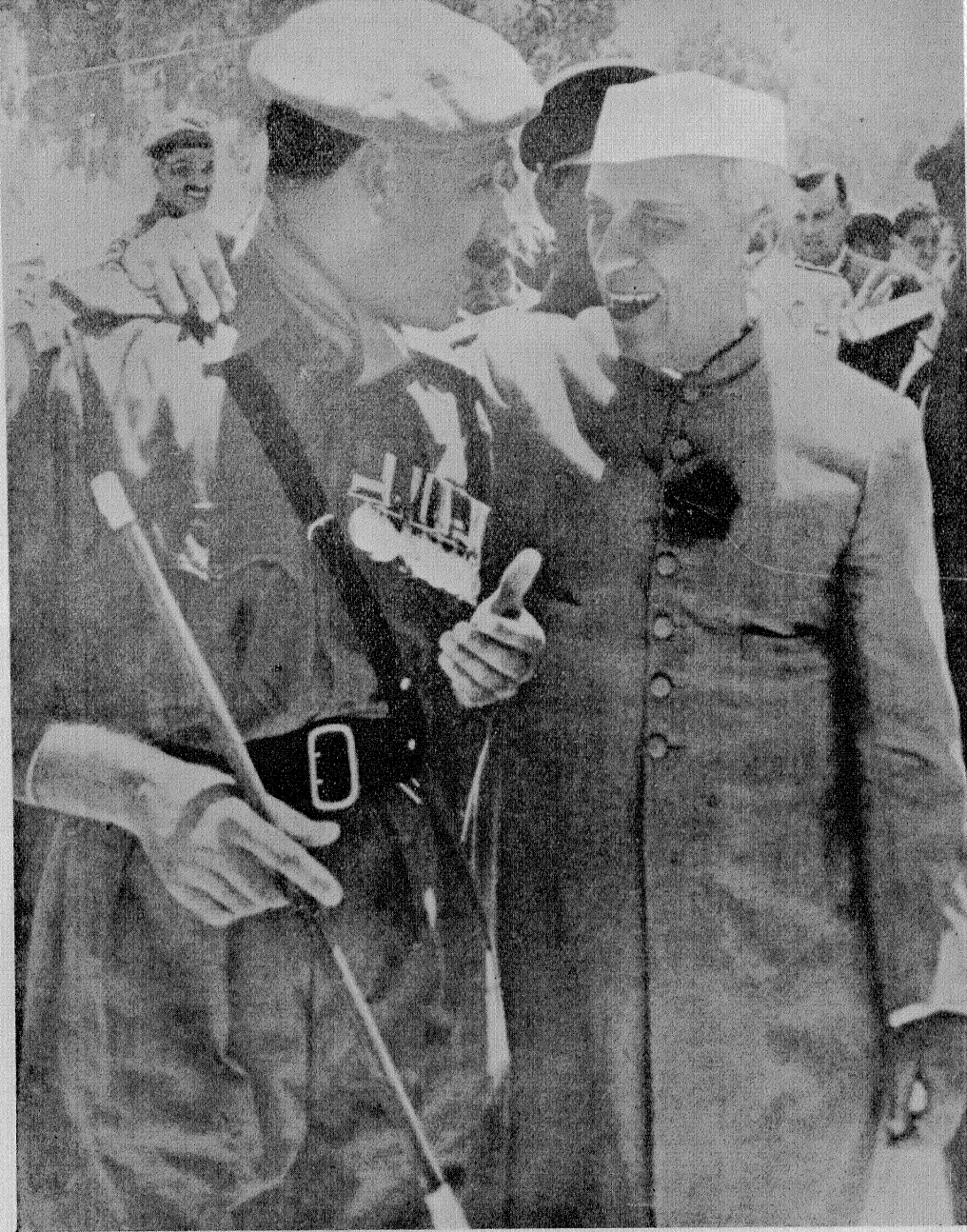


Meeting foreign cadets
at N.C.C. rally,
Jan. 27, 1961.

With sea cadets
who took part in
Republic Day celebrations,
Jan. 1961.

Looking at aeromodels
displayed by
N.C.C. Air Wing cadets
at NCC Rally, Jan. 27, 1958.





Visiting the U.N. Emergency Force in the Gaza Strip, May 20, 1960.

"I have found here, in spite of so many soldiers present on the Strip, an atmosphere of peace—not of war—and I have seen for myself how the United Nations has become a symbol of peace in this troubled world. We have any number of problems, some very serious and dangerous in this world, but even these very serious problems have been to some extent kept in check by the activities of the United Nations. Those problems will continue to pursue us and I hope that the work of the United Nations, trying to solve them and reduce the tensions that afflict us, will more than meet with success." (May 1960)

"The danger of war is not past, and the future may hold trials and tribulations for humanity. Yet the forces of peace are strong, and the mind of humanity is awake. I believe that peace will triumph." (December 1956, in USA)

THE PATTERN OF FUTURE WEAPONS

BY COLONEL R. L. JETLEY

BASIC CONCEPTS

THE army marches on its stomach, they say. But today's army can be more aptly said to march on its scientific and technological limb. The future shape of the Indian Army, therefore, will be what its technicians and scientists can make it.

The traditional concept of national defence relied heavily on the factors of time and space. Science and technology have changed all that. With the coming of age of guided missiles, the protection previously afforded by land masses and oceanic barriers no longer exists. Guided missiles, most military authorities agree, today promise to achieve the twin objectives of all weapon development: mobility and fire-power. In these respects, guided missiles will exceed any weapon ever devised by man.

Atomic warfare, using guided missiles, holds the maximum potential danger of vast scope. Any nation taking up development in this field must orient its basic educational system to provide the vast scientific manpower required and institute a large number of specialist training institutions for this purpose. A set of Services guided missiles schools will be necessary to acquaint the Services personnel with the new devices. The country's industry, particularly radionic and electronic, will have to be fully exploited. Therefore, a heavy expenditure and a very steady and gradual undertaking appears to be called for.

The enormous cost of rockets and missiles would restrict their universal adaptation in any armed forces, but some selected ones will have to be introduced early, at least for defence, to ensure that the armed forces are not incapacitated before they are launched. The nuclear war-head, being a powerful weapon of aggression and destruction on both sides, is not regarded as being in conformity with the national policy of any peace-loving nation. Nevertheless, academic studies must be made, being a basic necessity to the understanding of the future pattern of weapons.

The individual weapon today has given way to an era of the weapon system. Hence the greater need for planning for national security, which has resulted from the increasing diversity, complexity and cost of modern weapon systems. Such planning should aim at conserving the limited national resources of a country like India. The weapon system must be accepted as a whole and should be capable of achieving the aim effectively. The assessment of weapon systems may be required to be worked out even in terms of cost per lethal round or projectile fragment.

Such pattern of future weapons, whether for defence against external aggression or for internal security, should be worked out on short, intermediate and long term basis. It should also devise ways and means of avoiding a situation when an equipment developed by the Research and Development Organisation would be found unsuitable for adoption into service by the General Staff, having become out of date by the time it could be developed and produced.

CONSIDERATIONS

Just as changes in tactical doctrines bring about alterations in the organisation of the armed forces or evolution of new weapons, similarly developments in weapon technology also influence the organisation of the armed forces and their tactics. Weapons with very long ranges may have a bearing on strategy. As water finds its course according to the topography, so also the armed forces work out their way to victory by assessing the correct future pattern of weapons and modifying their organisation and tactics accordingly. The pattern of future weapons is deeply concerned with the likely foe. Sun Tzu (500 B.C.) said, "He who can modify his weapons, organisation and tactics in relation to his opponent and thereby succeed, may be called a Heaven-born Captain." In the present context, this task of the Heaven-born Captain is to be tackled at the national level, that is to say, by the Cabinet in consultation with the Chiefs of Staff and Scientific Advisers.

With the evolution of new weapons, the organisation must be fitted out to suit new techniques. This is best done by means of operational research. To take a timely instance, the introduction of guided missiles has brought about a major reorganisation of the armed forces in some countries. It would surely pay to make thorough and scientific studies in advance than risk thousands of men in battle to gain experience in a full application of these new weapons. The organisation should be assessed in controlled field experiments at, say, Combat Development Experiment Stations under the General Staff and the Research and Development Organisation by soldier-scientists; actual "war-games" should be played.*

PURPOSES OF WEAPONS

The terrains on India's borders vary vastly. Classified according to geography and terrain, the fighting that could be waged on India's borders may include snow warfare, mountain warfare, jungle warfare, desert warfare, air attacks, air transport operations and amphibious operations, besides the open country warfare.

*See *R. & D. Digest*, No. 1, Sep 59: *Military Applications of Operational Research Study*, by Maj.-General B. D. Kapur.

Recent developments in weapons have not made these forms of warfare obsolescent, nor have they nullified the time-honoured principles of war; nevertheless, these forms and principles need to be adapted to fit the new weapons, techniques and vastly increased fire-power which will characterise the future pattern. Tactics traditionally required concentration of forces; but mass destruction weapons demand avoidance of large concentrations of troops. This calls for a tremendous increase of mobility; a possible solution could be to achieve concentration for short periods, achieve success and then to disperse quickly and secretly. Naturally, this would necessitate mastery in the air. Without going into details, it may suffice to say that, in future warfare, the traditional principles of mobility, surprise, dispersal and fire-power, with excellent long-range communications, will form the key notes of any command.

Never before have our opportunities and our responsibilities been greater than they are today, when we are threatened from various directions. Therefore, it is imperative that we concentrate on the above-defined principles of war and derive our future pattern of weapons. At the same time, the existing conventional weapons, which will not lose their basic value in any future warfare, must be improved.

NEW WEAPONS

It has now come to be accepted that rockets and missiles will be the weapons of future artillery on land, sea and air. However, we have to ascertain the extent to which they can be adopted by us as the future weapons in view of financial aspects and other liabilities. Before a final pattern of future weapons, interim or eventual, on a 20-year basis, can be arrived at, we must compare them with conventional weapons to see which is perfectly suited for best utilisation.

Surface-to-air missiles have replaced the anti-aircraft gun during the past ten years on land and sea alike. This has taken place, to meet the challenge of the changed behaviour of the aerial target. The aerial target today is totally unlike that for which anti-aircraft artillery was designed. It flew much faster in 1960 than its counterpart did in 1939-40. As statistics reveal, the conventional artillery would not score even one effective hit to bring down an aeroplane if 600 shells are fired. For countering low-flying aircraft, however, an improved 30 to 50 mm. light anti-aircraft gun, equipped with a self-propelling mounting and capable of higher rate of fire and better accuracy with proximity fuses, is still a requirement specific for any country. On the other hand, the problem of surface-to-surface fire upto 30 miles range has undergone little major change; hence, there is no universal need for replacing the existing field artillery with missile or rocket fire, although further increase of range will be useful. In the U.S.A. as well as the U.S.S.R. today, the trend is towards using larger calibres with longer range and self-propelled mounting, compared with the guns they used during World War II. In order to reduce the number of towed

guns in the field, we must also study increasing employment of long-range, self-propelled, large-calibre automatic guns. In fact, for the essential needs of an infantry or armoured division, even in nuclear warfare, the conventional artillery gun may prove far superior to the surface-to-surface missile in precision as well as economy. Not that the surface-to-surface missile and rocket have no value—they would serve a very large purpose for supplementary missions beyond the range of the gun. But, they cannot replace the present gun for its normal role of close support.

ROCKETS AND MISSILES

A missile is anything that can be projected or thrown at a target; but the term is now generally used to denote a guided missile which has a homing device and also an initial guidance-setting arrangement. A jet or rocket device is always a requirement to provide the power of launching to a missile.

A guided missile can be put to many uses. The warships, armed with the most advanced conventional weapons, can successfully blockade upto 20 miles and utilise their carrier-based aircraft beyond hundreds of miles, but, for instance, the U.S. Navy's Regulus guided missile, which has range comparable to the carrier-based aircraft, is more effective without loss as it can be launched from a submarine from where one may not have control of the surface of the sea. The Polaris missile can strike at a target 1,500 miles away. The I.C.B.M., being launched from submarines, is hard to locate at source by the enemy.

A high-speed aircraft will travel several miles and any change in its course will take it beyond the lethal range of the burst of anti-aircraft projectile launched against it from the ground. A surface-to-air guided missile is more effective a defence against enemy aircraft and can intercept attacking aircraft at greater heights and range than a projectile. Besides, the target cannot take any evasive action, the missile being faster, more manoeuvrable and capable of changing its course by its guidance system upto the instant of interception.

The air-to-air guided missile are also becoming important. When two jet aircraft approach each other head-on, the range closes at a speed between half and one mile per second. It is difficult to see any enemy aircraft and hit it with the conventional, aircraft-based weapon at this speed. But an air-to-air missile can 'lock on' to the hostile aircraft when it is miles away and can pursue and hit the target despite evasive manoeuvres.

AIR DEFENCE SYSTEM

Hostile aircraft have to be detected while hundreds of miles away by long-range search radar. The LRSR, in turn, passes the information to interceptor aircraft and the early-warning radar located ahead of the target area; the EWR alerts the ground-to-air missile bases and anti-aircraft defences' control room. The first to intercept hostile aircraft will be

aircraft attacking them with air-to-air missiles. The second line of defence will be long-range missiles intercepting at 50 to 80 miles. The third line would be comprised by short-range missiles intercepting at 15 to 20 miles. But those enemy aircraft that penetrate these three defences will be engaged by conventional, automatic, electronically-controlled, anti-aircraft guns with VT fuses. With this defence, it is improbable that enemy aircraft will try to bomb any city, but they may resort to air-to-surface missiles launched perhaps at a hundred miles' range.

The answer to enemy air-to-surface missile is provided by an anti-missile missile, which will be relatively small, capable of being launched at extremely short notice, extremely fast and manoeuvrable. For a long time to come, an anti-missile missile may be beyond the financial/developmental limitations of a country like India which might, for the time being, accept no defence against air-to-ground missile and concentrate all effort on destroying the missile-carrying aircraft. It can also be said that, for the time being, no solution can be devised against the I.C.B.M. and the I.R.B.M. without such anti-missile missile; but these are not likely to be available for some time with second-rate powers.

However, an interim future pattern from among the new group of weapons may be devised for the protection of targets of national importance and troop concentrations of brigade or divisional group strength, as follows:

VT fuses for conventional automatic anti-aircraft guns; long-range search radar; air-to-air missiles produced in large numbers for effective defence; surface-to-air missiles for protection of large cities, communications and sources of supply; high-efficiency long-range communications; torpedoes, and small anti-tank guided missiles with homing guidance devices.

This order will conform to a sound policy of defence against external aggression. The group should be developed and produced on, say, the next five years' basis, otherwise any likely second-rate aggressor may be able to procure such devices from other second-rate powers which are advanced in the fields of research and development, and of production.

CONVENTIONAL WEAPONS

One might be overlooking one of the most important principles of war if one did not take *mobility* into account. The possible way to avoid mass-destruction would be to adopt small groups of forces, say, not more than a brigade group, concentrated at a place. But these should be so highly mobile (on wheels or tracks) that they could concentrate at 150 to 200 miles at short notice. Such schemes would cover any requirement of *dispersion* and achieve *surprise*. But they would also require a very high efficiency of communications and supply arrangements by air drops to be effective.

The requirements of a divisional fire-power are really quite different from those at a corps or army level. The division is concerned almost fully

with its own immediate needs. The corps artillery is counted upon for re-enforcement fire at need; but, unlike that of the field artillery, it is more largely occupied with counter-bombardment, harassing tasks and interdiction. In these latter, long-range roles, the corps must certainly be expected to make increasing use of missiles, particularly in the nuclear warfare, where their mass of fire-power justifies the cost and largely overcomes the present lack of precision. But, for purely re-enforcement fire from the corps, as is the division's own fire, it is recommended that conventional artillery be used. Even in this "missile age", the new battle groups at battalion, brigade and divisional levels should have, in direct support, their own conventional artillery with improved fire-power and a reduced administrative tail. This will also ensure that the bulk of fire-power, directed against the enemy at a divisional level, will not endanger our own troops. This cannot be ensured with rockets and missiles. To take another example, in anti-tank fire, to be able to knock out an enemy tank which is hurting our infantry, a nuclear missile or any other powerful destructive weapon cannot be used, since it will hurt our infantry more than the tank hitting them. Moreover, it is not easy for a big weapon to hit the enemy tank effectively at 2,000 yards when the vulnerable area is so small and the angle of fire which can reach it so narrow. Also, the smoke can restrict visual guidance. A wire-guided, small anti-tank missile may prove useful, provided the target can be seen and plenty available.

With the increasing emphasis on mobility, surprise and dispersion, it could be presumed that the number of towing vehicles should be reduced from what it is today, specially where road communications are extremely limited, as they are in eastern countries. To achieve surprise, the weapons must be made highly mobile as a co-related factor for dispersion. Also, huge concentrations of guns and ammunition-carriers should be avoided. Tracked or wheeled vehicles selected should use common multi-purpose fuels so that one common fuel for all types of vehicles can be air-dropped. A minimum of artillery equipment should be retained; it should be standardised, and marked by great mobility and automatic fire-power.

Whether a mortar or a gun is most suitable in open country warfare is a moot point. But, we must remember that, in the final analysis, a highly improved mortar with extreme accuracy and excellent mounting is a smooth-bore gun. At any rate, in open country, long-range mortars with all-aluminium hulls should prove indispensable. As regards fighting in hilly and jungle-clad terrain, while light pack artillery is already established as the most suitable for use as direct support weapons upto the divisional level, mortars of short and long range with pack-type mountings are recommended for such operations. It is unlikely that the corps and higher formations will be employed in this terrain under centralised control. This arrangement will provide a battalion or brigade commander with his own guns as well as the long-range heavy guns including those of the division or the corps, which would be a definitely better support for any concentrated or dispersed single

action. While both guns and mortars are proposed for use in mountainous terrain, how far they could be adapted to this role requires examination, preferably at the proposed combat operational research centre.

Field Artillery: For the open country where the going is good, two calibres of guns, both the types being self-propelled and automatic, should be developed for use by artillery personnel: one about 100 mm. calibre, for close support, and the other 150 to 180 mm. calibre. By grouping these in an artillery unit, flexibility of fire-power, curtailment of number of guns and ammunition-towing vehicles, standardisation of artillery units, and an increased interchangeability among units will be achieved. The automatic guns should have a 10-round-a-minute rate of fire. The conventional field artillery should be organised on the two-battery basis, each battery having one troop each of six light and six heavy guns.

For use in difficult terrain, light pack artillery should be developed which may be air-dropped. The weapons should be marked by great accuracy, utilising a variety of fuses working on the centrifugal force. The range should be approximately 16,000 yards, that is, sufficient to cover a divisional front.

Mortars: Light-weight, short and long-range mortars, should be developed for supporting the extended fronts of a battalion or brigade or divisional group in mountainous, jungle and desert terrains, as no long-range, heavy gun could be transported to these regions. The ranges should be 10,000 yards and 25,000 yards, respectively. An Infantry battalion should have four short-range (10,000-yard) mortars carried in carriers, man-pack or mule-pack. A long-range (25,000-yard) mortar is recommended as a divisional artillery for open country warfare also, with afore-mentioned stipulations, but it should be mounted in an armoured carrier. The divisional artillery unit should be organised as a 16-mortar regiment (eight mortars per battery). This will provide flexibility of fire-power when employed in combination with long-range guns.

Anti-tank weapons: There has always been controversy as to what is the ideal anti-tank weapon; meanwhile, as the tank gains more fire-power and superior armour protection, new anti-tank weapons to cope up with the development come up. Accepting that the best defensive weapon against a tank is a tank, let us examine what weapons should be developed. Except for the carrier part, it is proposed to have a common weapon for the tank and anti-tank role, since the aim in both roles is the destruction of the hostile tank. However, for the tank's primary role, the weapon should be a powerful gun to provide support to the infantry and to knock out enemy tanks in tank-battles. A small anti-tank guided missile may be proposed as an additional tank weapon.

For the interim, high-velocity guns with better communications should be retained for the anti-tank role. The hollow-charge or squash-head high explosive projectile should be fully developed for recoilless guns in the

anti-tank role. The Korean war showed that Napalm and aircraft were more effective, as the ground weapons got the target during the hop, step and jump only. Napalm development is also for consideration. An anti-tank guided missile launched from the aircraft would be highly effective. Infra-red equipment for night use by the tank and anti-tank weapons is also a requirement, since, with modern devices, a lull in battle during nights would be considerably reduced.

CONCLUSION

Conducive to any country's national policy, industrial resources, research and development facilities, defence production capacity and financial limitations, the following restricted and selective weapons are recommended for consideration of the "future pattern" to be developed and mass-produced:

Short and intermediate requirements:

- (a) VT fuses for conventional, automatic, anti-aircraft and field guns.
- (b) Long and short range search radar for anti-aircraft defence and field artillery radar.
- (c) Air-to-air missiles produced in large numbers.
- (d) Surface-to-air missiles for strategic air defence.
- (e) High-efficiency, long-range communication wireless sets for universal use in different weights and sizes.
- (f) Torpedoes and anti-tank guided missiles with pre-set and homing guidance devices.
- (g) SP automatic guns for the field artillery, with ten-rounds per-minute rate of fire, in light and heavy calibre, say 100 mm. and 150-180 mm. with ranges of 16,000 and 25,000 yards respectively.
- (h) Light-weight pack-type and carrier-mounted mortars of two types, one with 10,000 yards range and the other with 25,000 yards range. The ratio of pack-type numbers and carrier-mounted for protection and mobility should be worked out by the General Staff and the Combat Development Experimentation Station.
- (i) Light, pack field artillery guns for air-dropping and use in mountain and jungle terrains with 16,000 yards range.
- (j) Anti-tank weapons of great accuracy and high velocity should be developed. Hollow-charge, shaped charges and squash-head HE projectiles should be developed for RCL guns in anti-tank role, mounted as multi-tubes on armoured carriers, firing as a group directed on a target to ensure a sure hit. Napalm is also for consideration. Air-to-ground missiles for anti-tank role are suited.
- (k) Anti-aircraft self-propelled light and heavy static guns with electronic control and associated radar.

Long-range projects for study:

- (a) Ground-to-air missile including launching devices for submarines and ships.

- (b) Surface-to-surface missiles of 100 to 250 miles' range.
- (c) Long-range air-to-ground missiles.
- (d) An anti-missile missile.
- (e) I.R.B.M. (Intermediate-range ballistic missile).
- (f) I.C.B.M. (Inter-continental ballistic missile).

And, finally, the scientific method of operational research must be used to evaluate and try weapons when developed to merge in any existing organisation, otherwise to learn by battle experience will be very expensive.

The Chinese individual may be a man of peace, but the Chinese nation has not often been a nation at peace. Witness the pattern of warfare:

Every dynasty gained power by military action.

Every dynasty which succeeded in extending the imperial borders did so by military action.

Every dynasty, when not busy with aggressive wars of expansion on its frontiers, was usually engaged in fighting defensive wars there—for much of the period of its rule—or in suppressing internal revolts at home.

And, finally, every dynasty ultimately was toppled by military action.

Such has been the history of China, truly a 'warfare State'. China's present belligerency and her evident expansionist armies of today should not, therefore, be looked upon as a passing phase, or as being out of character, or unexpected. On the contrary, they are entirely in keeping with the pattern of China's historic past.

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A CASE FOR YOUNG TALENT

BY MAJOR B.N. SHARMA

INTRODUCTION

Napolean, when he fought his Italian campaign in 1796-97 was only 27; his opponent, General Beaulieu, 72. The results of the campaign are known to the world. Alexander crossed the Hellespont in 334 B.C. when only 21 years old, and before he was 32 he had already established the largest empire the world has ever seen. Julius Caesar, when he visited the great sarcophagus of Alexander with Cleopatra, shed a tear. Cleopatra asked him, "Why did you cry?" Caesar looked at her sadly and replied, "Because he had conquered the world at 32. I am 52. Can I keep the world from conquering me?" Charles XII, most colourful, daring Commander the world has seen, blazed into prominence when only 18, and died in 1718 when 36 years of age. Belisarius was appointed the General of the East and won his great success at Daras before he was 25. His memorable battles in Persia, Italy and Africa were fought when he was young. Haider's dazzling victories over the British in India were achieved during his younger years. Robert Clive fought his Arcot and Plassey when young. Rommel, the youngest Field Marshal in the German Army, had, before he was 52, fought two world wars and chased the Eighth Army to the very gates of Alexandria.

ALL great Captains of the world—with few exceptions—reached the peak of their professional pride in their youth. An old, fatigued body houses a tired mind; the twain cannot originate or execute daring plans. Napolean is said to have remarked, "There is little enterprise left in a General after his 45th year." Nor is it a question of physical capacity only. "Man's life, intellectually," says Burton, "has been divided into two portions; the ascending and descending, the climax being put at 37 years."

NEW TRENDS

This was so when commanders physically led the armies into the battlefield and warfare was simple. With the mechanisation of armies and sophistication of the means of destruction, the premium in leadership lay, among other things, in cool courage, professional knowledge tempered with wisdom, and what the French so aptly described as "le sens du praticable." This lasted the end of World War II. With the emergence of the unconventional as the accepted form of future warfare and an alternative to nuclear holocaust, the emphasis has again shifted to small battles and cold-

war operations. The battle of army groups are a thing of the past. In the theatre of operation on our northern borders it will again be a war of small battles fought in mountainous and jungle terrain, the battles of young leaders.

WHERE IS THE ACTION

Youth is forward-looking, original, impetuous and resilient. Young minds are full of new ideas; some rash, some not so. Why not pour these fresh ideas into our age-old military machine, dying of stagnation and inertia?

Time and again our leaders have said, "We want young blood." Our training memoranda and training digests keep on harping *ad nauseum* on the decisive role of young officers in our border operations. We, as a nation and, consequently, as an army, keep on working up ourselves into a moral frenzy by waging a paper crusade and parroting away time-worn military cliches like meaningless slogans.

What are we doing about the young officer? Volumes of training directives and instructions extol the virtues of young officers. Theses have been written about the post-commission training of the young officer and that during the first year of his service, quoting liberally from Major-General W.D.A. Lentagne's article. That is the stock answer.

It is about time that we practised what we preached. The difficulty is that many a commander is so scared of his higher ups, that it seems he does not fight the enemy, he fights the higher headquarters, so worried he is about his grading and the A.C.R. (Perhaps rightly so, our present standards of assessment being what they are.)

Trust the young officer, let him do something. Encourage initiative, self-reliance and enterprise in him. No C.O. dares give an independent assignment to his young officer. He is worried about the results—what will the higher-ups say if he failed or made a bloomer. If you are the right C.O. and have given the right type of basic training to your youngmen, nine out of ten, the chances are that the young officer will deliver the goods. Trust begets trust, loyalty breeds loyalty. Moreover, the young officer has a better receptive mind, an itch for action and a dare-devil attitude to hazards than the play-safe, A.C.R.-conscious type.

RISKS AND MISTAKES

We want to be sure of everything and leave nothing to chance. We are so much afraid of making a mistake. Every commander makes some mistakes; what is necessary is that one must learn from them. Wavell says, "Every successful commander has bit of a gambler in him." Of course, foolhardiness should not be mistaken for a calculated risk. There are always some imponderables of war, which the commander must try to minimise by making a thorough assessment of enemy intentions, by careful planning and preparation. There is, and always will be, that one chance in a hundred

that one did not cater for; but that is a part of the game. The science of war is not exact. Every old soldier knows that no battles are fought exactly according to plan and that military histories are written in the drawing rooms. The battle is a chaos of small actions, at least most battles are.

We, as a nation, want to do the ideal thing in whatever we do, with the result that we never realise the truth and have no sense of reality. Every commander wants to ensure success, fight safe, translate exact tactical formulae on the battle-field and fight a war of geometry. Indian army has the largest number of above-average and outstanding officers on its roll. Alas, we still have our Selas.

WHOM DO WE FIGHT

Why do we not realise that we have to fight the enemy and not our assessors? A victory in the battle-field is much more important than a thousand A.C.R.s. One practically successful move in the battle-field is worth tons of white paper wasted on sand-model strategy. Here lies the root of all evil. We want to be assessed as outstanding officers, no matter what the Chinese think of us.

A commander with an eye on the battle-field and not on the dossiers at Army Headquarters will take a calculated risk and give a bloody nose to the too inquisitive enemy. He knows how to use his young officer. He will give him his blessings and full confidence and ask him to achieve a task.

A battle-worthy young officer may, at times, be turbulent and difficult to control. He must be so. General Sir Ian Hamilton, in his book, "*Commander*", says that an officer good in orderly room procedure, always punctual and smartly dressed on parades, the man of spit and polish, who is always right, afraid of making a mistake, and who always does what is expected of him may be good for a peace-time army but is of no use in battle. While the other, who is a dare-devil, a bit of a rebel and malecontent, has always a difference of opinion with his seniors on practical tactics, and is willing to prove his point by doing the thing; he may be a difficult subordinate for the C.O. to control, but he is the one who will fight the enemy and grant him no quarters.

It is the task of the C.O. to encourage this type. Let him not perish by neglect, supersession and sheer exhaustion in his desperate bid to cope up with the peace-time intricacies of our regulation-bound army. In the NEFA, it was this type again who delivered the goods. He was the last to leave the field. I know for certain that a young officer will adore his senior and probably sacrifice his life for him if the latter makes the slightest effort to understand him, encourage him, and guide his turbulent energies in profitable directions. He becomes disheartened when this understanding is not forthcoming.

The Chief of the Army Staff once said, "I am quite happy with my young officers. They have proved their worth in the NEFA." What, then, prevents the rest of the Indian Army C.O.'s from trusting them? Give them

some independent task calling for qualities of imagination, self-reliance, enterprise and, above all, practical common-sense. Stand by him if there is one failure out of ten successes. A mistake committed on the battle-field after eliminating all possible imponderables and after thorough planning and preparation, or a minor error of judgement, is not a subject for court martial or a summary of evidence. It is a part of the game.

A LEAF FROM HISTORY

Two examples from Indian History prove convincingly the worth of the young talent.

The first example is provided by the battle of Kaveripuk—the first trial of strength between the French and the British in India. Clive was marching from Arcot towards Kaveripuk, where the enemy had already occupied a strong position barring the road. The French, with the native Indian troops, had a superiority in force. They had 2,500 cavalry; Clive had none. The commander of the French and the native force was Riza Sahib, son of the titular Nawab of Carnatic.

The French position was a strong one and extremely well-chosen. About 250 yards to the north of the road, which ran east-west, and facing the British advancing from the east, was a mango grove on a fortified redoubt. Here were placed the French guns and some infantry. About 100 yards south of the road and running parallel to the mango grove ran a dry water course, wherein was positioned the remaining infantry, consisting mainly of native troops. In the gap between the water course and the grove and to the south of the water course the cavalry was poised to strike the decisive blow.

Clive, marching unawares, was surprised by the enemy opening fire from the grove. The infantry from water course pinned down any move of his troops south of the road. The cavalry making an enveloping move from the south, threatened to cut off his retreat. The situation was perilous in the extreme. The day was saved by the daring and skill of a young officer, Lieutenant Keene, Clive's second-in-command and Seymond, his assistant. Based on the information that, in his over-confidence, the enemy had left the rear approaches to the mango grove unguarded, he, under orders of Clive, took his detachment, consisting of about half the total force, by a circuitous route well into the rear of the enemy position. The task was extremely hazardous. He had reached about 300 yards to the rear of the grove. There he halted for breath and sent his junior officer Seymond to reconnoitre the rear approaches to the grove and check up on the enemy dispositions. All alone this officer entered into the grove. There he met a few native sipahis who challenged him. He bluffed them by his French speech into believing that he was a French officer and returned back by another circuitous route to report back his discovery. The enemy gunners, he reported, were mainly concentrating their attention on the English at the front, completely oblivious of any threat from the rear. This settled the plan

for Keene. He ordered his troops to form up in a line, delivered a devastating volley into the gunners and carried the guns on the point of bayonet. The gun thus silenced, the day was won. The fugitive from the grove carried the native infantry from the water course with them and Clive was the master of the battle-field. Thus it was that the young officer's courage, cool nerves, and presence of mind turned a near disaster into a glorious victory for the British army.

THE FORTRESS OF WANDE'WASH

The second example occurred during Haidar's war of vengeance against the British. Haider was knocking at the door of Madras, while the bordering district of Mysore and the fortresses round Madras lay at his feet. Realising the strategic importance of the fortress of Wandewash, 72 miles southwest of Madras, as a pivot for manœuvres, Haidar had arranged its surrender by buying its Kiladar.

When all seemed lost, the daring of one young British officer baffled the great master of war. Lieutenant Flint, accompanied by a hundred *sipahis*, moving across unchartered country, successfully avoiding Haidar's army looming everywhere, reached Wandewash on the forenoon of 11th August, 1780. He immediately announced his approach to the Kiladar and demanded admission. The Kiladar refused. Through a pretence of exchanging letters, he, accompanied by a small escort advanced to the ramparts of the fort. Assuming a bold front, he asked the Kiladar to surrender to him the command of the place. By sheer bravado, bluff and on the point of his pistol and the bayonets of his escort he overwhelmed the Kiladar and his retinue. Before the Kiladar could recover from the shock, the English *sipahis* admitted their comrades within the gate and the fort was won.

No single act in the war contributed so much to save Southern India for the British as this one act of Lieutenant Flint. He not only seized the fort but held it for about six months from 12th August, 1780 to 12th February, 1781, against the pick of Haidar's army. To quote Colonel Malleeson, "Wandewash was the shield that protected Madras."

CONCLUSION

The young talent of today is itching for action. Youth is another name for enterprise. It is the mandate of the mature heads to harness with wisdom, sound advice and guidance this turbulent stream into constructive channels. A pat on the back, a nod of approval, or timely restraint administered with sympathy and understanding will open for us a new dimension in national energy. Why waste it? "Every young man is not a Napoleon," say the wise heads. But Napoleon was young. "Genius," they say "will tell," but Genius is a rare phenomenon and a product of centuries. All commanders are not geniuses either. It is these who make the army. Let us beware, lest by sheer mental inertia, our mania for regimentation, blind worship of peace-time values, and rigid adherence to Field Service Regulations, we do not weed out the potential young talent, our Rommels of tomorrow.

WAR AND POPULATION

By P.N. KHERA

ALTHOUGH a true soldier is ever ready to fight, when necessary for the defence of his country or an ideology, he is never anxious to *start* a fight. In the modern civilised society any person or nation who instigates or starts a war is considered as committing a crime against humanity. Still, wars do occur, as they have been doing in the past, and it becomes the duty of every nation to train and maintain armed forces to defend its frontiers against invasion. Poets and philosophers are always conjuring up visions of an age in which man will cease to fight against man and war will be a thing of the past. But when that Golden Age will come, no one can say; and the fact remains, if recent history is any guide, that wars do break out and result in untold misery upon the inhabitants of this little planet of ours. It therefore becomes essential to study the causes of war and remove them if possible.

Wars result from many causes and it is not possible to deal with all or even a few of them within the scope of an article. It is therefore proposed to take up just one of these, namely the ever-growing pressure of population on the resources of the world.

Connection between war and growth of population has long been recognised, but perhaps the first person to express it in a scientific treatise was Malthus who lived from 1766-1834. We shall shortly revert to him and study his theory in detail, but it is necessary for the moment to examine how pressure of population has, in the past, acted as an indirect and sometimes direct cause of war at different stages of the development of human society.

HUNTING STAGE

In the earliest stage of mankind, about which we hardly know anything, groups of human beings used to wander about in different parts of the globe in search of game. They had their rudimentary weapons with which they hunted. It is quite conceivable that when the supply of game in a particular locality declined, relative to the number of human beings who increased, the group or tribe raided another forest. If there was no tribe already there, well and good; but if there was, then a skirmish or clash occurred, and this led to a state of constant hostility between neighbouring tribes.

Similarly, rivalry for the possession of fishing areas also led to skirmishes or hostilities. Sometimes a group which came upon some suitable spot abounding in fish or game, or both, marked off its area of operations

and organised itself for defending it against all intrusion. Similarly, when wandering herdsmen came across a good grassland, they settled there and defended their cattle and guarded against those herdsmen who were still wandering. This type of collective ownership led to regular warfare instead of mere raids or skirmishes. This happened when the tribes were more or less leading a settled life as opposed to a migratory one.

AGRICULTURAL STAGE

It may thus be correct to say that when man passed from the hunting and migratory stage to the agricultural and settled stage, war became institutionalised. This transition from hunting to the agricultural stage was a long process, but was encouraged by women who found it more convenient because of their physical necessity of bearing and rearing children. This had three important results: firstly, population began to increase more rapidly among settled people, than among migratory people; secondly, the settled and agricultural tribes became less warlike and aggressive than the migratory ones, since they were concerned more with defence than aggression; and thirdly, the settled people had to pay more attention to organisation and finesse, and improvement of weapons, to balance the superior physical strength, dash and daredevilry of the migratory raiders. All these factors resulted in making warfare into a fine art and an institution as opposed to skirmishes with fists and crude weapons.

This, however, did not prevent the wandering tribes who had flocks of cattle or animals from raiding grasslands, or the grassland people from raiding agricultural people. The great movement of the Mongols from Central Asia to Europe in the 13th Century is a typical example. Another example is that of the Scottish highlanders who continued to raid the agricultural lowlands right up to the 16th Century. The excuse put forth by raiders always is that all human beings have an equal right to the earth and its produce; and it has been said in justification of this, that human nature being what it is, no tribe would like to leave its home if it had enough to sustain it in its original abode. We are, however, not concerned with the right or wrong of the question here, but with the fact that, whenever a tribe or nation has found its population outgrowing the means of subsistence, it has invariably broken out of its territorial limits to infringe upon the territory of others, and, conversely, that whenever a raiding people have discovered or developed means of sustenance, they have given up the marauding habit. As a historical example of this is cited the case of Scottish highlanders who stopped raiding the lowlands after the introduction of cultivation of potatoes in their land in the 17th Century.

CONNECTION BETWEEN WAR AND POPULATION

The connection between food supplies, growth of population and war is, therefore, clearly visible and has been responsible in the past for invasions and wars. This can be shown in another way also. In the past we have had

many cases of wars and invasions made by people from regions which were less productive of food, such as deserts or mountains, and very few or none by people inhabiting agricultural lands. It has often happened that when an agricultural people have begun to increase faster than the food supplies, they have taken to commerce and industry so that they could buy their food supplies in exchange. But when more than one community finds itself in this position, then a competition for markets springs up—and this again leads to war. Study the problem from any angle and you come to the conclusion that population and war are vitally connected.

MALTHUS' THEORY

Although this connection was long recognised, Malthus was, as mentioned in the beginning, the first person to explain it scientifically. His theories, essentially controversial, but also essentially true, have been discussed so much during the last century and a half that it is not proposed to detail them here. But it is necessary here to give a brief outline of his thesis to understand the connection between population and war. His argument may be summarised as follows:—

- (1) Food production is limited by the law of diminishing returns, but the rate of increase in human numbers is not limited. Thus, sooner or later, population will necessarily overtake production either in a particular country or in the world as a whole. When that stage is reached in a country it becomes necessary to increase food production by better methods of cultivation, acquire more land by imperialist methods or to check the growth of population. Better methods of cultivation and food production will solve the problem only for a time, for when the peak output under new methods is reached, the law of diminishing returns will again begin to operate, while population will continue to grow. Ultimately, therefore, we shall have to fall back upon the expedient of limiting the population.
- (2) It follows that, if man is to live, growth of population has to be controlled and checked. There are two ways in which this is achieved: (i) positive checks and (ii) preventive checks. Positive checks are those which can be applied *after* reproduction has taken place. Among these may be included disease, famine, war, infanticide, etc. Preventive checks are those which aim at reducing or preventing reproduction, such as celibacy, late marriage, continence abstinence and what are now commonly known as family planning or 'birth-control' methods.

We are not concerned here with all the checks mentioned by Malthus, but only with the fact that he mentions war as one of the positive checks. It may also be noted, that although the mathematical accuracy of Malthus' theory (that population increases in geometrical ratio and food in arithmetical) is not accepted, his general theory that population overtakes food supplies is accepted by all sociologists.

If that is so, intelligent human beings have to decide whether to apply the positive checks—like famine, disease, infanticide and war, *etc.*, or the

preventive checks. The answer is not in doubt: nobody favours the positive checks. Infanticide is ruled out both as inhuman and illegal. Famine and illness are also inhuman. In fact, advance of modern medicine and the faster means of transportation have progressively resulted in reducing the horrors and effects of famine and illness. Thus, among the positive checks, only war is left to fall back upon, and there is no doubt that people would like to die fighting than by disease or famine.

RELIGION AND THE DOCTRINE OF FORCE

But although war is preferable to other positive checks like disease, famine and infanticide, etc., it is neither a normal method of living nor a normal method of dying. Being based on the principle of force, it is not acceptable to a large number of humane minds who challenge the doctrine that force is the ultimate principle of life. This powerful challenge to the doctrine of force, largely accepted in the western civilisation, comes principally from religion and philosophy—Buddhism, Christianity and Gandhism—all having their origin in the East. Both Buddhism and Christianity had large followings, in the east and the west respectively, and man has in the past bowed his back—at least outwardly—to the fundamental teachings of these religions, namely the principles of equality and the love of fellow humans. Inwardly, however, it seems that man was bored to death with such ideas, and when men like Schopenhauer, Nietzsche, Darwin, etc., began to put forth their concept of life—based on force and the ‘survival of the fittest’—it stirred the latent paganism of man and he began to drink the intoxicating meaning of these philosophies with great relish. Thus, centuries after the full adoption of Christianity, the drama of blood and slaughter, iron and steel, continued to be enacted in Europe. The new philosophies of force and the men who practised them were occasionally put to shame by the permanent vision in the background—the vision which warned them that “those who live by the sword shall perish by the sword.” This vision, however, went on becoming dimmer and dimmer, so much so that during the fifty years preceding World War I, the shame was completely gone and the idea of force was discussed and supported openly. The vision was completely eclipsed, and the result was the two world wars with all their horrors and bloodshed.

PREVENTIVE CHECKS ESSENTIAL

That these wars, on a gigantic scale never known in the history of mankind before, have resulted in untold and incalculable misery and loss, is not denied by anyone. Yet, this very fact has proved a blessing in disguise, in that it has led to a growing realisation that if the preventive checks are not applied, positive checks are bound to operate. It was this realisation which led to the holding of a world conference on population in Rome in 1954 under the U.N. auspices. The results of the deliberations of that conference point unmistakably to only one conclusion, namely that if man is to survive, he must bring about a balance between production and

population, and that, that is possible only if family planning and checks on the unrestricted growth of population are consciously and deliberately applied on a large scale. Some of the facts established in the Rome Conference are given below.

POPULATION FACTS AND FIGURES

The population of the world has been increasing since the dawn of history and at present stands at the colossal figure of 2.5 billion (250 crores). The present annual increase is about 34 million or 4,000 an hour or more than one a second. The total population is expected to become four billion by 1980. The present high rate of increase is due to the advance in medicine, decline in infant mortality at the time of child birth, control of malaria and other diseases, etc.,—or, to put it briefly, control of death. In India, life expectancy has risen from 20 to 32 during the last twenty years, but birth-rate has not slowed down. Such observations apply to many Asiatic countries, though in some western countries, the birth-rate has fallen owing to rising standards of living.

DISADVANTAGES OF LARGE POPULATIONS

The disadvantages of large populations—apart from wars—are that the area taken up for building houses will gradually eat up all space and nothing will be left for enjoyment of scenery, recreation, playgrounds, ancient monuments, gardens, etc. Erosion of soil, deforestation, and destruction of wild life are already going on. Another disadvantage of growth of population is the coming into existence of big cities where people are cut off from all contact with nature. The extreme, hopeless situation may not be reached in the life time of our generation or the next, but is bound to come sooner or later. For example, in India where birth and death rate are both high, the death rate is being reduced—a good thing—but the birth-rate is as before. Owing to certain prejudices and weaknesses, the preventive checks are not applied to the extent necessary. It is estimated that if the present death rate—26 per thousand—is reduced to 10 per thousand and birth-rate continues the same, our annual increase will be 80 lakhs—the size of one London every year. About two-thirds of the population in India is under-nourished, and according to the census report of 1951, keeping pace with food production will fail when we reach 45 crores. That means we shall be very large in numbers, but shall be a nation of ill-fed, half-starving pigmies. This will provide a great temptation to some strong nation to make war on us and destroy us.

THE ONLY REMEDY

The Government of India have, therefore, wisely adopted the control of population as their official policy, but it is feared that they will not be able to achieve much without the people's co-operation. Since we are opposed

to waging war and committing aggression against others, it is incumbent upon us to see to it that we do not tempt others to commit aggression against us. The only remedy is to make our nation and our people strong and healthy by regulating our population in accordance with the production and supply of food in our country. Such a course of action is only the essence for a people committed to peaceful co-existence and avoidance of war.

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THE INTERNATIONAL COMMISSION FOR VIETNAM

BY MAJOR-GENERAL A. S. NARAVANE

Towards the end of World War II, Japanese Forces found themselves scattered all over South-East Asia, including Indo-China. In March 1945, the Japanese, who till then had allowed the French to maintain a vestige of authority in this region, fell out with them and assumed full control. The Viet Minh and the Indo-Chinese Communist Party called on the people to resist the Japanese as indeed they had resisted the French. After the Japanese surrender in August, 1945, the Allies moved in to disarm these Japanese forces and arrange for their evacuation. At this time the Viet Minh organised and led what was known as the "August Revolution". By this time they had gained sufficient power and standing to declare the formal establishment of the Democratic Republic of Viet Nam on 2nd September, 1949. The people of Indo-China had carried on a struggle against the French for some considerable time even before the commencement of World War II and therefore naturally they did not welcome the idea of the return of the French.

The Viet Minh, the name given to the political party operating in Viet Nam with very distinct communist leanings, took up the struggle against the French. The military arm of this party is known as the Peoples Army of Viet Nam, or in brief as PAVN. All the politically conscious elements in this country, whether communist or otherwise, joined in the struggle against the French. Their effort, however, varied in intensity and extent of sacrifice. A long and bloody struggle ensued all over the Indo-China territory, composed of the three main groups—the Vietnamese, the Laotians, and the Cambodians or Khmers.

After some time it became apparent to the French that with their depleted material resources and manpower they were in no position to continue the struggle indefinitely and that therefore a political settlement would have to be negotiated. They were basing their policy on the division of Indo-China into three separate and autonomous countries, *viz.*, Laos, Cambodia and Viet Nam. The French were still thinking of these territories remaining in the French Union. The fighting was most intense, principally in Viet Nam and in the provinces of Sam Neua and Phong Saly in Northern Laos, which are contiguous to the boundaries of present day North Viet Nam. It is of interest to note that the bulk of the combatant troops were provided by PAVN, the military arm of the Viet Minh. The Laotian and Cambodian resistance workers carried on the campaign in their own territories with the active support of the PAVN.

GENEVA CONFERENCE

IN February, 1954, at Berlin, it was agreed by the United States of America, the United Kingdom, France and the Union of the Soviet Socialist Republic to hold a conference at Geneva on the 26th April, 1954, to hammer out a solution to the problem of restoring peace in Indo-China. On the 24th April, 1954, the Prime Minister, Shri Jawaharlal Nehru made a statement outlining his six points plan for peace in Indo-China. The Geneva Conference was attended by representatives of Cambodia, the Democratic Republic of Viet Nam, France, Laos, the Peoples' Republic of China, the State of Viet Nam, the Union of the Soviet Socialist Republic, the United Kingdom and the United States of America. It is significant to note that this was not a conference under the auspices of the United Nations. China, which even today is not a member of the United Nations, was able, therefore, to participate in this conference.

In April and May, 1954, the French suffered a crushing defeat at Dien Bien Phu. The situation looked extremely grave and both the power blocs decided that it was about time to call a halt to the fighting which has been going on since 1945.

In July, 1954, what are known as the "Agreements on the Cessation of Hostilities" were drawn up, one each for Viet Nam, Laos and Cambodia. The signatories to these Agreements were different in each case. In the case of the Agreement for Viet Nam the parties to it were the DRVN on the one hand and the French High Command on the other. For the Laotian Agreement, the parties were the DRVN and the Pathet Lao on one side and French on the other. In the case of the Cambodian Agreement, one party to it was the Cambodian Government and the other was the Khmer Resistance Forces and the DRVN. Finally, the powers represented at the Conference issued a final declaration. It is important to note that though America was present at the Conference, she was not a party to this declaration. The United States, however, took note of these Agreements and the separate declarations of the participating powers, and stated that she would refrain from the threat or the use of force to disturb them, in accordance with Article 2(4) of the Charter of the United Nations dealing with the obligation of Members to refrain in their international relations from the threat or use of force and that she would view any renewal of the aggression in violation of the aforesaid agreements with grave concern and as seriously threatening international peace and security.

THREE COMMISSIONS

According to the agreements reached, three separate Commissions were to be established, one each for Laos, Cambodia and Viet Nam to supervise the cessation of hostilities and control the future entry and exit of war material and military personnel into and out of the territories concerned. Provision was made for the regroupment of the Armed Forces within a period of 300

days. Any civilians residing in a district controlled by one party, who wished to go and live in the zone assigned to the other party, were to be permitted and helped to do so by the authorities in that district, provided such moves were completed prior to the termination of the movement of troops. The Agreements also provided for the repatriation of prisoners of war and gave protection to the members of the resistance movement against persecution for actions in connection with the freedom movement. In the final declaration, in so far as Viet Nam was concerned, it also provided for the settlement of the political problems to be effected on the basis of respect for the principles of independence, unity and territorial integrity of Viet Nam and further stipulated that the Vietnamese people would be permitted to enjoy the fundamental freedoms guaranteed by democratic institutions established as a result of free general elections by secret ballot. It further stated that consultations were to be held after the Agreement had been in force for one year, *i.e.*, after July, 1955, so that elections for the political settlement in Viet Nam could take place by July, 1956. This special declaration in respect of Viet Nam was necessary as for the purpose of cessation of hostilities and regrouping of opposing forces, the territory of Viet Nam had been divided into two parts roughly along the line of the 17th parallel. The Agreement on Viet Nam also provided for a demarcation line to be drawn up and the establishment of the Demilitarised Zone on either side of the demarcation line.

The Commissions in the three countries were to consist of representatives of India, Canada and Poland, with India as Chairman. The same three countries were also to provide the machinery for the conduct of elections in Viet Nam in 1956. In pursuance of these Agreements and the final declaration mentioned above, a conference was held in New Delhi to co-ordinate the setting up of the three Commissions. At the conclusion of the Conference, the Government of India issued a declaration in August, 1954, informing the members of the Geneva Conference States that complete accord had been reached between the three States Members of the International Supervisory Commissions and further stated that the three Commissions had been established on the due date, *viz.*, 11th August, 1954, in the three territories in accordance with the terms of the respective Agreements.

It is necessary once again to emphasise that the three Commissions established in Indo-China received their mandate from the Geneva Conference States and were in no way connected with the United Nations nor responsible to that organisation in any way. The funds for the Commissions are being met by the United Kingdom, the Soviet Union, China, France and the PAVN. The three member countries of the International Commission were to bear the expenses for salaries of their Delegations. The local expenses were to be met by the parties to the Agreement. The Commissions were required to report back to the Conference States, but in practice the commissions have been reporting to the Co-Chairmen of the Conference, *viz.*, the Foreign Ministers of the United Kingdom and the Soviet Union.

The parties to the Agreement are responsible for its implementation, whilst the Commissions are required to exercise supervision to see that the parties do implement the Agreement. It must be stressed that the Commissions are fact-finding bodies and can only make recommendations to the parties concerned to implement the various clauses of the Agreement. In case a party fails to heed their recommendations, the only further action the Commissions can take is to report the facts to the Co-Chairman. It will be seen that the Commissions, therefore, have legal and moral powers as opposed to the ability to impose any sanctions. The Commissions' decisions are binding on the parties and there is no appeal against it. The Commissions report periodically to the Co-Chairmen, through the Government of India, which was nominated as the administering authority for the Commissions and also given the task of being the Chairman of the Commissions in the territories.

By 1958, a measure of peace and quiet had been restored in Laos, and, as provided for in the final declaration, national elections were held. Thereafter, at the instance of the Laotian Government, the Commission for that territory was adjourned *sine die*, though the Polish Government was opposed to the move and the Government of India were not happy at this prospect. The reader will recollect that, since May, 1961, the Laotian Commission has been reactivated. In Cambodia, a political settlement having been reached in 1955, as provided for in the Agreement, the Commission progressively reduced its activities after consultation with the International Commission in Viet Nam and Laos. In Viet Nam, however, neither the negotiations for elections nor the projected elections were held by July, 1956. Consequently, no political settlement was achieved in that country by the target date and it has not been achieved even to this date.

In early 1956, the South Vietnamese authorities established their own government and took over control from the French of the territory lying to the south of the demarcation line. The government of this territory was called the Government of the Republic of Viet Nam. In July, 1956, the French High Command finally pulled out from Viet Nam. The Republic of Viet Nam made it known that though it was not a signatory to the Agreement and as such not bound by it, it would *de facto* offer its cooperation to the Commission in Viet Nam. By the same token, they are not contributing towards the expenses of maintaining the Commission in Viet Nam.

Since 1956, the Commission in Viet Nam has been trying its best to implement the Geneva Agreements and its success has been dependent on the measure of co-operation it has received from the parties, that is the Southern and Northern Authorities. It might be added that the Commission issues periodic interim reports which set out the activities of the Commission during the period of the report and the measure of co-operation it had received from the parties. So far, eleven such reports have been issued.

THE COMMISSION AT WORK

The reader might perhaps be interested as to how the Commission in Viet Nam functions. Under the terms of the Agreement, certain points in the territories of the North and South Viet Nam were designated as entry points, and it was further stipulated that the entry or exit of war material and personnel from the two territories would only take place through these points, after due notification and supervision by the Commission's teams. At each of these entry points, a team consisting of one or more representatives of India, Canada and Poland was established. In addition to the controls at the particular points of entry, the teams have also been given certain tasks which are of a more mobile nature. Mobile controls were designed to cover the frontiers, both land and sea, in order to prevent any violation of the Agreements. Such controls involve visits to certain parts of the country along designated routes. The Commission could also set up special mobile teams for carrying out specific tasks such as investigating an allegation of a serious nature by either party. As with the Commission, the team was also able to take decisions by majority and to bring to the notice of the Commission such facts as they consider worthwhile where they have noticed a violation of the Agreement or a lack of co-operation or otherwise by the parties concerned. The Chairman of the team is always the Indian member. In the first instance, these teams were located at all the points of entry and were equipped with means of independent communication with the base in most of the cases. At the request of the Co-Chairmen on grounds of economy four teams have been abolished since 19th December, 1960.

In the Commission itself, apart from the Commission meetings at the level of the Ambassadors of the three Member States at which the major decisions are taken, various other subordinate Committees exist, each having the same composition, viz., a member each from India, Canada and Poland. The principal Committees are:—

- (a) *The Operations Committee*—to consider all questions referred to it by the Commission pertaining to operational matters.
- (b) *Legal Committee*—to consider all cases in which a legal interpretation of the Agreement or the action of the parties is involved.
- (c) *The Freedoms Committee*—to examine all cases where the democratic freedoms guaranteed under the Agreements are alleged to have been violated by either party.
- (d) *The Ad Hoc War Materials Committee*—to examine the question of credits and debits for the export/import of war material.

The Commission is served by a Secretariat consisting of three main branches—the Administrative Branch, the Operations Branch and the Freedoms Branch. All questions on these subjects which may be raised by the three Delegations are progressed by the respective Branches. The officers for the Secretariat are found from the three member countries, but the units which provide the logistic and communication support are found from the

Indian Army. The main elements are the signal company, a medical unit, a postal unit, a movement control detachment and an ordnance detachment. These units are administered by Headquarters Alternate Delegate (India), an organisation staffed by the Indian Armed Forces personnel, particularly the Army.

The International Commission is responsible for supervising the proper execution by the parties of the provisions of the Agreements. For this purpose the Commission is required to fulfil the task of control, observation, inspection and investigation connected with the application of the provisions of the Agreements on the Cessation of Hostilities. The principal grounds on which the Commission takes up any matter are either observations received by it from its teams or allegations of violations of the Agreement by either of the Parties.

It may be of interest to give examples of the type of complaints which need the Commission's attention:

"One of the party alleges that on a particular date and at a particular place the other party imported war material or received foreign troops. If the information is detailed enough, the Commission would ask the other party for its comments and thereafter would debate the question at a Commission meeting. If it is satisfied that the facts alleged are correct then the Commission would 'cite' the offending party for violation of the articles concerned, viz., Articles 16 and 17, which govern the entry of military personnel and war material into Viet Nam. It could also recommend that this war material should be controlled and sent out of the country. If there is no truth in the allegations, the case is closed."

"It may happen that when a team goes out on controls, the Liaison Officer provided by the Mission either does not allow the team to go into a harbour or airport to carry out their tasks or alternatively the Liaison Officer fails to produce the manifests for the ships or aircraft for the team to assess whether military personnel or war material had been brought in. The commission would ask the party for its explanation and failing a satisfactory reply would award a citation under Article 25 and it may even decide to inform the Co-Chairmen and the Member States of the Geneva Conference under Article 43 of the Agreement of Viet Nam."

"It will be recollected that under the agreement former resistance workers were guaranteed protection for their activities during the resistance movement. One of the party may allege that the other has victimised an individual for such activities, on political or other grounds. The Commission would ask the party complained against to give details of the charges against the individual, punishment awarded, etc., and take action as appropriate on receipt of the reply."

"It may be alleged that a party has built up a certain area as a military, naval or air base in contravention of Article 18. The party would be asked to give its explanation and if necessary a team of military experts would be sent to ascertain the facts and thereafter the Commission would come to a finding on the subject."

"One of the parties may allege that the other is allowing its own territory to be used for activities prejudicial to the peace and security of the other or that it is sending men and material to support the revolt against the complaining authority. This would be a very serious charge and would need careful examination as it cuts into the very root of the Agreement itself."

The above are some examples of the type of complaints that the Commission has to consider from time to time. The details of the findings of the Commission are given in the interim reports which are published periodically.

THE TEAM

As to how the teams function and as to what they are supposed to do may be of some interest to the reader. As stated earlier, the teams are located at certain agreed entry points. The Agreement provides for the teams visiting other places also, but this can only be done with the concurrence of the party concerned. It will be remembered that the parties are only allowed to receive or send out personnel or war material through the agreed points. So the need to visit other points only arises when an allegation is received or information is obtained that one of the parties has been making use of some other points for importing material and personnel, or that some activity in violation of the Agreement is taking place there.

In so far as the work at the team site proper is concerned, this is usually divided into what are called local controls and mobile controls. As the name implies, local controls consist of checking the port, airport, rail and road transport facilities in the station concerned, to ensure that there is no infringement of the relevant clauses of the Agreement. Mobile controls entail the team visiting specified points along specified routes with the same purpose in mind. The team as stated earlier consists of Indian, Canadian and Polish representatives. Previously some of the teams consisted of two or more members, but today all the teams are single member teams, except for Saigon and the team at the Demilitarised Zone. The Polish member is also permitted to have an interpreter, if he so wishes. The party provides Liaison Officers for the teams, whose task it is to take the teams out for their control duties, to give the necessary protection and to look after their local administration. These Liaison Officers are the representatives of the parties and are generally provided through and by the Liaison Mission, which each party has positioned for conducting all business with the Commission. Team vehicles are Commission property but they are maintained by the parties, who also provide the drivers.

Let us see now how one of these teams functions. Their guide and bible are the Geneva Agreement, Protocol 23, which is an additional document issued in amplification of the Convention and agreed to by the Parties and the policy decisions which have been issued from time to time by the Commission. Protocol 23 is a document drawn up by the two parties to

the Agreement in Viet Nam and provides for the checking of the entry into and exit from Viet Nam of troops, military personnel, arms, ammunitions and other war materials. This Protocol lays down various definitions concerning size of units and what constitutes arms, munitions and war material. It also provides for the manner in which war material worn out or expended can be replaced and the drill which has to be exercised by the International Commission in this regard. The Commission has also drawn up instructions for the teams which have also been agreed to by the Parties. As will be realised the same rules must apply to both the sides and the decisions must be consistent with those taken in the past, unless circumstances have arisen which necessitate a change. The members of the team, therefore, have to make a thorough study of the documents mentioned earlier and the rulings given over the past eight years in respect of the provisions contained in the documents mentioned above.

The team meets every day and they decide the time at which they will carry out the mandatory controls laid down for them. As variation in the date and time of control is of great importance in the attainment of surprise, the team takes a decision on the control and then gives the requisite time notice to the Liaison Officer that the team will proceed on control at a certain time and date. In this context, it must be mentioned that the teams do not take Sundays and other gazetted holidays for granted and that they have been given the choice to decide one holiday per week. This again is to avoid the controls becoming routine and to introduce an element of surprise.

INDIAN ARMY PERSONNEL

As stated earlier, in addition to the various Committees and teams staffed by officers, there are also units and detachments of Indian Army for providing the necessary logistic support. In so far as the Signals are concerned, to begin with there was a full regiment to provide cover for the Laos and Cambodian Commissions in addition to the Viet Nam Commission. However, on the reduction of activities of the Laos and Cambodian Commissions, the strength was reduced to that of a Company. Even though the Laos Commission has been revived now, it has its own signal communications independent of the Viet Nam Commission. Personnel of the Indian Army units are flown in and flown out by chartered flights for their nine-month tenure of duty. About two-thirds of the strength of troops are located in Saigon and approximately one-third at Hanoi in North Viet Nam. At these stations, the troops live in camps and have their own messing, canteen and recreation rooms—very much on the same lines as in India.

There is, however, the language difficulty which is felt by our troops as it denies to them the normal amenities, for example, cinemas. Even when going out for shopping or for excursions, the language difficulty is felt. In addition, being in a foreign country, the need for maintaining

discipline and the good name of our country is of very great importance. To add to all this, since India is the Chairman country, the decisions of the Commission taken from time to time are sometimes reflected in the attitude of the people towards our personnel. All these factors further limit the freedom of movement and amenities for our jawans. In view of this, suitable arrangements have been made by Army HQ, to the extent possible under the circumstances, for the regular despatch by air of mail, newspapers and the provision of projectors, films, records, indoor games and other means of amusement for our troops. A canteen is also run where daily requirements are made available at reasonable prices. It has been mentioned earlier that the messing for troops is on the same lines as in India. Some items are purchased locally and others are imported from India. Some other items, such as *atta*, have to be obtained from Australia.

The various units and detachments are formed into a well-knit body in order to keep the men happy and, at the same time, maintain discipline. In order to avoid staleness and make the best use possible of the opportunity to see the manners and customs and way of life of the people of this area, an interchange of duty between Hanoi and Saigon is arranged during the period of their tenure. Where possible, opportunities are also given for visits to certain historic sites in Laos and Cambodia. In Cambodia one finds the famous ruins of Angkor Vat, ancient temples built on a magnificent scale, which are a proof of cultural ties between India and this part of the world. They were in ruins and covered over by forests until the last century when they were discovered and reconstructed. Because of the pressure of work and the limitation of facilities available, only a certain number of the personnel can visit such places of interest.

CONCLUSION

In this article an attempt has been made to give a brief history of the conditions prevailing in Indo-China prior to the formation of the International Commissions, and the activities, functions and composition of the International Commission for Supervision and Control in Viet Nam. An attempt has also been made to give an idea of the role played by the Indian Armed Forces, their environments, the facilities provided and some aspects of the limitations under which they have to live and work.

Combating guerrilla warfare demands more in ingenuity than in money or manpower....

—U.S.A. Secretary of Defence
Robert S. McNamara

ARE GENERALS OBSOLESCENT?

BY 'FANGA LA'

COMPUTERS are basically adding machines which differ from the simpler office models in three respects: first, they possess larger memories, enabling them to produce, in a second, any item of information, far beyond the capacity of a clerk using a filing system. The second is that they can be provided with a series of instructions called a 'programme', which they will follow out in sequence without further human interference. The third difference between electronic computers and ordinary adding machines, is their fantastic speed of operation. A modern computer can do in about 10 seconds, work which would take a clerk a year.

A computer can therefore be used to sort things on order, according to any pre-conceived set of rules. Computers can be of two basic types. One type is known as 'digital', where units are counted off and accurate totals produced. The other type is known as 'analogue', in which a number of electric currents, representing the factors to be studied, can be combined to produce a new current representing the outcome of all the forces at work, very much on the principle of the slide-rule. Some modern computers embody both techniques¹.

CURRENT ACHIEVEMENTS

Computers based on the above capacities, are commercially available and are used for calculations which would not be worth attempting by normal means, because the result would no longer be of interest when it was obtained. For instance, where a missile flight lasts a few minutes, it is obviously useless if the calculations to determine where it is in order to correct its course, take an hour to produce. Computers can integrate signals from a missile and provide the answer in micro-seconds.

Electronic computers have already made their impact on large organisations. "The kind of problem for which they are eminently suited occurs in a group of mills weaving cloth. The cloth is of different number of pieces, for one delivery or split deliveries, and for delivery at specified dates or to schedule: the looms differ, some being capable of weaving only plain and cheaper grades of cloth, others being versatile have a high capital value and should have the maximum time on the higher value material. Planning, therefore, is a complicated problem of determining the most profitable way

¹ The human brain also combines both systems.

of allocating production to available capacity. This is a problem which can be solved by...an analogue computer..."²

In the UK, a computer brings planes in from across the Atlantic, balancing alternative flight routes, runway availability, fuel reserves and so on, to produce the most efficient result. In some cities in the USA, every crime is recorded by computer, which can often predict where the next crime in a series will occur, by analysing the known modes of operation of different criminals. Computers are also used to work out time-tables for railways, and calculate dock-space and crane availability to speed up ship-turn-round-time. A computer has been applied to consider the running of a farm. A most efficient farm was chosen and the computer was told the acreage, productivity of each field for given amounts of fertiliser, wage rates of labour, current prices of products and so on. It considered every alternative way of using the available resources until it arrived at the most profitable combination. When these recommendations were implemented, profits rose by about 30 per cent.

If war broke out today, computers would probably find their most useful application in deciding between distribution of resources. To examine every combination of ways of resources is the ideal use computers can be put to.

The examples given above are straight-forward and may have misled the reader into believing that computers can only do what they are told to do. The radical difference between a computer, and anything else man has ever built before, is their ability to 'learn', and so to arrive at patterns of behaviour unforeseen by the man who programmes them. Hence the description of computers as 'electronic brains', and the fear that they might one day come to dominate their masters—a popular science fiction theme.

Research on computer-learning is being done by instructing them how to play games. Games are suited for this, because these have clearly-defined rules and objects which can be programmed for computers. Moreover, this research arises from a desire to eventually make computers play war-games.

Computers soon learn to play a good game of draughts. They can be programmed to store the results of a series of games, and the moves made, and survey all the games after each move, and to prefer the moves which have most frequently resulted in wins. It will soon discover that if it makes certain moves it will win more often than if it picks others. It makes these discoveries in the manner that you or I make them: by weighing up a lot of results and noting which ones succeed. We define this process as learning, though to many the thought is distasteful. What computers are doing in such operations is writing their own programmes. They are programmed to write their own programmes.

2. The Principles and Practice of Management, Second Edition, edited by E.F.L. Brech; p. 339.

The reasons for computers choosing certain lines of play are often not known even to their research masters, who are sometimes beaten by the computer. Machines never make the occasional slip which humans are liable to make when tired. Computers have even been taught to play bridge and chess, where the moves are more complex, to an extent which enables them to beat poor players. It is such developments which have put the computer far outside the adding machine category, and has brought into usage the term 'cybernation': for the control of equipment by machines; and has given rise to the question, 'How intelligent can computers become?'

ELECTRONIC BRAINS AND INTELLIGENCE

Some technicians feel it is a waste of time to try to build more brain-like machines, when we have plenty of human-brains already available. This is true, but the point about computers is that they can do things that the human brain can't do. The present trend is to develop their speed and accuracy to the furthest limit. Thus, the size of components is being reduced, so that the time taken for electrical signals to pass through circuits is correspondingly reduced. Relays which would formerly have occupied a square foot can now be packed in an area smaller than a match box. Computers the size of a tennisball have been built to control missiles. Developments in speed have reached the point where data can be put into storage and taken out again in 20 thousand-millionths of a second. New terms have had to be coined for such brief flashes of time.

It is the ancillary equipment for feeding in, and extracting data which now causes maximum delays. There is a drive to equip computers with sight in order to save time lost in feeding data to the machines. Devices designed to read railway invoices are already in use in the USA. This machine can read a novel of about 80,000 words in just over a minute, provided the pages can be turned fast enough. So also, in order to speed up the extraction of data, special printers have recently been designed which can print calculations at the incredible rate of 4,700 characters per second. Some models can play-back tape recordings thereby giving it a vocabulary of stereotyped remarks. Intelligible speech has now been synthesised and it is likely that the computer of the future will explain its recommendations in words.

Apart from research to increase speed and accuracy, the technical problem of how brain-like computers might one day become, is being considered by scientists, who are fascinated by the machine's ability to imitate human behaviour and achieve its results in the same manner as the brain does.

The brain has a much vaster memory than the computer, and this memory is fed with masses of information daily for 20 years before it achieves adult behaviour patterns; and even then the behaviour may leave much to be desired. Existing computer memories are incapable of holding anything like the amount of information held by the brain. However, this is a technical limitation and progress is rapid. Experts have predicted that in 50 years

the construction of computers with memories better than humans may be confidently expected. Moreover, computers can be fed information from other computers so that the education of a new computer could be completed far more rapidly than the education of a human being. Also, since they are immortal, one can count on the eventual computer with far more information at its disposal than any single human could hope for.

The brain, however, unlike a computer, does not simply memorise digits; it also forms concepts. The problem of artificial intelligence is being actively studied and specially designed mechanical eyes and brains are being developed in the hope that these will recognise shapes and perhaps faces. However, the sophistication of the human brain is far beyond the present ambitions of computer builders. One can't, therefore, be quite as confident that computers will one day equal man in concept-forming ability, as one can about memory.

Human beings not only think and remember, but also feel, and a record of what we feel is embedded in our memories, along with factual data. We know very little about how this takes place. Some suspect that it is connected with the changing chemical patterns in the brain; computers have no chemical aspect. Nevertheless, technicians claim that computers can be designed to feel. We all know how a child takes time to distinguish between the inanimate and animate. We also know how some men treat their cars as if they were human. Some argue that a computer which "exhibited quasi-human characteristics might well arouse affectionate emotions in its master and could readily be programmed to show sympathy and interest in any individual identifying himself by a particular call-sign. Before long, a computer will be able to recognise an individual optically and will be able to develop sympathy towards him by self-programming methods resembling the growth of human sympathy much more nearly."³

It is sometimes claimed that computers cannot think inductively or show insight. Though it is true that computers are today deliberately designed for deductive calculations, they can and have been programmed to perform inductive operations. A computer is reported to have produced a brilliant new solution for one of Euclid's problems which had never occurred to the mathematicians.

It is also sometimes stated that computers are distinguishable from men, who are endowed with 'free will'. The only pragmatic test of free will is that the outcome of behaviour be unpredictable. There is apparently no difficulty in endowing computers with randomising devices which will make their response to a situation wholly unpredictable⁴. Some may claim that free will entails something more than this, to which no reasoned reply is

3. An article by G. Rattray Taylor, entitled, 'The Age of the Androids', published in the magazine 'The Encounter', Nov. 1963 issue. I am largely indebted to the author for a number of ideas expressed in this paper.

4. This is how computers function whilst selecting bonds.

possible, except to challenge them to propose a test which can be applied to a computer which will prove that it does not enjoy free will.

It is sometimes asserted that men 'understand' a problem they are studying, whereas computer do not. A careful analysis of this assertion may show that this is not as straight-forward as it seems. Pragmatically, 'understanding a problem', implies grasping the principles involved, and applying these to an analogous situation to produce a solution. This is exactly what an 'analogue' computer, as the name indicates, is designed to do.

Some go so far as to suggest that "there is no logically sufficient condition which will determine whether a set of responses has been given by a human being or by a suitably designed computer. Thus, the old problem of mind v/s brain has taken on a new urgency. The conclusion.. is that, if the day comes when a computer (provided that it understands English perfectly and is incapable of lying) replies to the question 'Are you a person?' with an affirmative, we shall have to believe it."⁵

SOME FUTURE TRENDS

Responsible theoreticians claim that, in thirty years, machines will be smarter than men. Even today one can see computers taking over in several fields. Cybernation has made possible the control of industrial processes from a central position remote from operations. Examples are to be found in steel making, manipulating and transport. Cybernation has been applied to control looms and machine tools where complicated designs have to be produced⁶.

New doors are being opened in medicine by the use of computers. Machines digest vast amounts of clinical and statistical data at fantastic speeds to help researchers find answers to complex questions and open entirely new types of investigation. At Mayo Clinic in Rochester, Minnesota, patients are given a psychological test involving completion of a 566-question inventory. This is fed into a computer which compares the information with data stored in its memory and selects and prints out appropriate diagnostic statements, which are made available to the patient's physician. At the University of Illinois College of Medicine, scientists have built a mathematical model of a heart patient in order to test new and powerful drugs. All the conditions of heart disease are fed into the computer. Then, by adding more variables to represent the action of the drug, it is possible to simulate the clinical effects the medication would have on a real patient⁷. There is no reason why an electronic computer, if fed relevant legal evidence, should not be able to pass sound judgements.

5. *Ibid*, no. 3: attributed to Michael Scriven from a paper entitled, 'The Compleat Robot: A Prolegomena of Androidology'.

6. *Ibid*, no. 3 : Footnote 2, page 381.

7. *The Sunday Statesman* (Calcutta edition), 8 March 1961.

With these advances in the application of computers, it is worth considering "appointing" a machine to the Military Secretary's Branch at Army Headquarters for the sole purpose of assessing officers and writing their Annual Confidential Reports. A factual question-inventory on each officer could be completed annually. This inventory, when fed into a programmed computer, would be compared with data stored in its memory, and a printed confidential report on the officer's present worth and capabilities will be made available to the commanding officer. In cases where adverse reports are printed, there would be little purpose served in an officer appealing to a computer. Commanders at all levels would be in the enviable position of being able to handle aggrieved officers without much difficulty. Considerable paper-work and heart-burning is likely to be saved by all.

The possibility of conducting war operations by computer are undoubtedly being studied in both America and Russia. It does not require much imagination to foresee the application of computers to business strategy, to war and to the drawing up of national budgets. Financial Secretaries, Auditors and Principal Staff Officers at Army Headquarters can expect to be early victims of cybernation unemployment⁸.

LIKELY CONSEQUENCES OF CYBERNATION

What will be the impact of large-scale cybernation on industry and society? The optimists feel that "automation is not a new function of management but it is a new tool or technique which is going to be increasingly used in the activities of design, research, planning, control and operation, i.e., in all the divisions of an organisation. Far from turning men into robots, it is likely to increase the demand for skilled and technical personnel, not only in the realm of middle management, but also on the factory floor where there will be more setters, 'programmers' and planners and the proportion of indirect (overheads) to direct operators will continue to rise, as it has done for years. There is no evidence that the continuing trend towards more automatic control represented as automation will, of itself, cause more redundancy of labour than will quickly be absorbed by the continuing increase in demand for goods. The effect of more automation is to reduce the use of human labour for heavy, arduous and repetitive (and usually boring) jobs and to increase the number of jobs that are interesting or require more intelligence. To this extent it can and should reduce the strains and frustrations of industry."⁹

The pessimists, on the other hand, go to the other extreme and warn of the dangers of machines making robots of us all; replacing supervision by men, by control by machines¹⁰. Are such fears real? The truth probably

8. I had pondered over whether I should use the 'obsolete' or 'obsolescent' for the title of my paper and eventually chose the latter. Therefore, the present-day incumbents should not worry unduly. It's the young officers who might lose sleep over their future.

9. Ibid, n. 3: ref. Footnote 2, page 383.

10. A doom-laden report issued in 1963 by the US Centre for the Study of Democratic Institutions, entitled 'Cybernation: the Silent Conquest.'

lies between the two extremes. Undoubtedly we are heading towards a second Industrial Revolution, and it is worth considering what the social consequences of it may be in the future. Some effects are fairly evident. There will be a widening of the gap between the developed and under-developed nations and an intensification of the problem of leisure in those countries which go in for wholesale cybernation. However, some of the consequences are not so evident and raise novel issues¹¹.

Firstly, just as steam and electric power displaced craftsmen and substituted a new social class of time-scale paid labour, computers may disenfranchise the middle-manager, a class which contributes to many community activities and consumes many quality goods and services. The disruption of this class could have social and commercial consequences which would change the whole pattern of society, as we know it. It has taken society a century to work out the consequences of the first industrial revolution, and the second may well be as far-reaching.

Secondly, people will tend less and less to attempt to understand public issues and will leave everything to computers. Politicians will be unable to debate public issues and will confine themselves to quoting the results produced by their Party Computer, in contradiction to those produced by the rival party computer. Political discussion will be reduced to argument between the programmers as to the soundness of the rival computer programmes. People who understand computers will become a powerful elite.¹²

Thirdly, "man may delegate all his important functions to computers, thereby undermining his ability to think for himself. .we may be led into abdicating to computers a moral responsibility and a psychological involvement in our own fates which we cannot, as human beings afford to do without. .faced with the competition of these fantastic machines, we may despair of making our own intellectual efforts and sink into trivial or self-indulgent activities."¹³

On the other hand, conjectures about the future may prove to be of academic interest only. Perhaps, long before the impact of cybernation can make itself felt in India, it may well be that a computer elsewhere might press the button that sets off World War III. More than one science fiction author has written on this theme, depicting a bizarre situation where rival computers will be programmed to go on conducting offensive operations even when all human warriors on either side (and the neutrals as well) are dead. A situation in which even subalterns may be presumed to be obsolete.

11. The three examples which follow are based on a few of the many issues discussed by G. Rattray Taylor in the article already referred to in Footnote 3.

12. I am given to understand that the only modern electronic computer in India is at The Tata Institute of Fundamental Research, Bombay. Whilst discussing this machine with a research worker, it was evident that operating it, as such, was no problem; programming it was the real difficulty. This requires an expert or another trained computer.

13. Ibid, n. 3.

NEPAL-TIBET WAR, 1855-56

BY KANCHANMOY MOJUMDAR

INTRODUCTION

The Nepal-Tibet war, 1855-56, forms an important episode in the history of the interrelations of the Himalayan states on the northern border of India. Nepal-Tibet relations in the middle of the 19th century were far from cordial, and although a show-down had not taken place after 1793, a state of intermittent tension prevailed on political and commercial scores. Disputes over lands on the ill-defined and undemarcated frontier, particularly on the western sector, further exacerbated the relations. Nepal fretted and fumed; the humiliation of 1793 had to be avenged.¹ Tibet was vigilant, concerned; Nepalese aggression on a scale much larger than that in 1792-93 was a perpetual bogey. That the uneasy peace did not terminate violently was due mainly to the Nepalese preoccupation in other matters. All was not well on Nepal's domestic front. Parties were scrambling for power; there were strifes and struggles, bickerings and blood-baths. There was, besides, the exciting game of spinning a cob-web of intrigues with states in India and with those on her immediate periphery with a view to setting up a strong confederacy of powers against the British. In the middle of the 19th century political order was restored in Nepal, and stability in relations with the British rehabilitated with the emergence of Jang Bahadur Rana as the Minister of Nepal.²

Besides, China's relations with Tibet had always served as a restraint on Nepal's policy towards Tibet. In the middle of the 19th century China's hold on Tibet started loosening. The vast region of Eastern Tibet, in particular, was in recurrent throes of revolts and insurrections against the Chinese yoke at Lhasa.³ This had a significant bearing on Nepal's relations with Tibet.

THE BACKGROUND

NOR were the Nepalese grievances limited only to settlement and de-limitation of boundaries. The Nepalese government alleged that its subjects in Tibet were maltreated and arbitrarily punished; cases of loot and arson of Nepalese property in Tibet multiplied; armed clashes between the Nepalese and the Tibetans were not rare either—and all with the full knowledge and, may be, connivance of the Tibetan authorities. The Nepalese government's remonstrances had all the while been treated with "silent contempt"; the Tibetan government was impervious; the Chinese *ambans* (Residents) at Lhasa were mute witnesses; even a direct appeal to Peking could not shake the latter's calculated indifference to the just

grievances of the Nepalese.⁴ To make matters worse, the Nepalese embassy to China sent in 1852 returned in May 1854, six months behind schedule, carrying the news of wilful illtreatment suffered at the hands of the Tibetans all along the route to Peking. None survived the torture of the Tibetans except the leader of the delegation, Lt. Bhim Sen Rana.⁵ A more inflammatory report followed in its wake; a Nepalese subject was murdered at the hands of the fierce Khampas at Gartope in Eastern Tibet. That dished the lot. The issue was joined. The accumulated grievances of Nepal ripened into an ultimatum to Tibet; the simmering discontent found utterance in large-scale military preparations; a show-down was imminent.

MILITARY PREPARATIONS

Pending satisfactory reply to the ultimatum, Jang Bahadur forged ahead with extensive military preparations. Strong detachments took command of the principal passes leading to Tibet, with the dual object of multipronged offensive, as also to insure against a sudden thrust of the Tibetan army into Nepal through these passes. The four regiments stationed at Sisagarhi, Dullu, Peuthana and Salleana were ordered to move to join the regiment already at Jumla in western Nepal, and be in readiness there under the command of Colonel Krisna Dhoj Kunwar Ranajee, the governor of Doti. The force had the orders to guard western Nepal, as also to move into Tibet by the Yarri pass.⁶ The Chaubisi and Baisi rajas⁷ were alerted and asked to raise levies at the earliest order. Colonel Kharg Bahadur, a cousin of Jang Bahadur, was ordered to proceed for Dhan-kuta in eastern Nepal and take command of five regular regiments, charged with the task of guarding eastern Nepal as well as marching into Tibet through the Walloongchung pass.⁸ The Kirats and Limbus, two aboriginal tribes of eastern Nepal, were also asked to gird up their loins. The main offensive was to be launched by two large forces through the Kerung and Kuti passes in western Nepal, the Kerung division, ten thousand strong, being commanded by General Bam Bahadur, a brother of Jang Bahadur, and Kuti division of thirteen thousand men under Colonel Prithwi Dhoj Rana.⁹ If the Tibetans did not oppose the Nepalese occupation of Kuti and Kerung, the two divisions were to forge ahead till they formed a junction at Tingri Maidan. Should they meet with opposition, two large divisions would be promptly despatched from Kathmandu, the commander of one being Jang Bahadur himself, and that of the other General Jagat Shamsher, his brother. Jang Bahadur was hopeful of securing assistance of the Bhotia inhabitants of Kuti and Kerung by promising them to reopen their grain trade with Nepal which had lately been stopped under orders of the Tibetan government, and which had caused them (Bhotias) great distress.¹⁰

It was now the autumn of 1854. Kathmandu was agog with unprecedented enthusiasm. Yelling young men vied with each other for recruitment; regiments were drilled to perfection; arsenals were being supplied with war materials of all kinds; the foundries were overworked; the frontier

depots were stocked with provisions carried by an unending stream of porters. All about there was the clink of arms; there was the air of eager expectancy, excitement and high events. It was difficult to hold the excited troops in leash till the winter was over, rendering the ice-clogged passes traversable. The Tibetans too braced themselves up; several of their corps converged at Digarchi.¹¹

Before the hostilities were sparked off, the Nepalese government wrote three letters, one to the Chinese Emperor, the second to the Chinese *ambans* at Lhasa and the third to the four Tibetan *Kajis* at Lhasa, asserting in each one of them that the apathy of the Chinese Emperor, the lukewarmness of the *ambans* and the hostility of the Tibetans had compelled the Nepalese government to take recourse to war.¹² The letters were intended to serve as due notices to both the Chinese and the Tibetans, for

"It is proper that we should fight openly like honest people and that we should not be guilty of any treachery towards each other. I therefore give you the notice before any of our troops set foot in your country and that you may be properly prepared to meet us."¹³

The real object, however, was to gauge the reaction of the Sino-Tibetans to Nepal's projected expedition and to ascertain whether they intended meeting the Nepalese demands peacefully or repelling the invasion.

As the spring drew nearer Nepalese military preparations were keyed up. The greatest problem was that of supply and transport of provisions to the frontier depots. A proclamation was issued, asking every householder, however indigent he might be, to transport a stipulated quantity of rice to one of the five depots on the frontier, either by hiring the services of porters, or if they could not afford it, on their own backs. Under this stringent order the poorest land or householder had to deliver about 32 seers each, and bear a transportation cost of three or three-and-half Nepali rupees. A defaulter was liable to capital punishment, and to loss of caste and expulsion from the country if he were a Brahmin. No concession was allowed, no exemption permitted. Even the highest officers of the state, the Minister not excluding, were brought under this law, which was put through in spite of the people's rumbling resentment. To soothe the soreness of the soldiers, a number of promotions were made, many new posts created and the quota of enlistment augmented.¹⁴ Bam Bahadur marched on 6 March, 1855, with three regiments and twelve guns towards the Kerung pass, and Colonel Prithwi Dhoj towards the Kuti pass with two regiments.

This massive military preparation made the Tibetans uneasy, and obliged them to send, in February, 1855, a peace mission to Kathmandu with the undertaking of redressing the Nepalese grievances. The emissary was pointedly told that Tibet must purchase peace by surrendering to Nepal Kuti and Kerung together with a crore of rupees. The price, Jang Bahadur himself admitted, was "preposterously large", and that he was prepared to

sheathe the sword even with a lesser indemnity. Jang Bahadur could hardly overlook the fact that the ostensible earnestness of the Tibetans for peace squared ill with the reported movement of a large body of their troops to Tingri Maidan, as also to the passes opening out to Nepal.¹⁵

THE WAR

In April, 1855, the War started; in a skirmish at Chusan, near Kuti, the Nepalese under General Dhir Shamsher put a force of about five thousand Tibetans to flight. The victory was duly celebrated at Kathmandu with a salvo of twenty-one guns. Flushed with success, the Nepalese forged ahead and occupied Kuti.¹⁶ Another contingent, under General Jagat Shamsher, occupied Kerung without any encounter with the Tibetans. The two victorious corps marched on to Jhunga about ten miles from Kerung and met with a stiff resistance near the fort of Ghantagarhi. After nine days of hard fighting, the Tibetans gave in, and Jhunga fell into the hands of the Nepalese.¹⁷

So far the Nepalese had achieved success, but not without encountering difficulties. Extreme cold weather and unusually heavy snow storms rendered the Nepalese guns unworkable, froze some Gurkhas to complete inactivity, and some others to even death. The unusually inclement weather at such a time of the year the Nepalese attributed to the necromantic craft of the Tibetan lamas. It made them disheartened and sapped their morale. It was foolhardy to fight the supernatural elements, they murmured; some even deserted their ranks. The report of large Tibetan army under the Sethia Kaji (the Tibetan C-in-C) having assembled at Tingri Maidan added to their concern.¹⁸

Jang Bahadur, too, found to his dismay that the expedition would be not just a cake-walk affair; he had been rather oversanguine; difficulties had, of course, been anticipated, but not of such magnitude. Restoration of the waning morale of the troops was now the paramount necessity. A more comprehensive plan for recruitment was laid out. General Badri Narsing, a brother of Jang Bahadur and Governor of Palpa, was asked to keep twenty thousand men ready for service, and General Krishna Bahadur, another brother of Jang Bahadur, was instructed to enlist all those who were prepared to serve as volunteers. Hundreds of retired soldiers and officers filled the ranks without pay in the hope of reward in future. From the Kirata country one man from every house was called to service. Steps were taken, in short, to harness the whole fighting population of Nepal, about two lakhs in number, for a war which might assume a national character.¹⁹ Jang Bahadur himself left for Kerung on 7 May, 1855, with a contingent of Nepalese troops.²⁰

With the occupation of Kerung and Kuti, the prime object of the war may be said to have been realised. The superiority of the Nepalese army had been vindicated; the defeat of 1792-93 had been avenged, and the national prestige recovered. The need was for consolidating the acquisi-

tions. Jang Bahadur was, hence, prepared for a cease-fire and negotiate for peace, but on condition that "not an inch of the occupied territory" would be given up by the Nepalese.²¹ These acquisitions were the hard core of the issue, and for them Jang Bahadur was prepared to meet all eventualities. But then, there were disturbing reports of the Chinese waking up. Resident Ramsay diagnosed Jang Bahadur's mind in the following words :

"The dread of eventually coming in contact with the Chinese army now appears, by His Excellency's (Jang Bahadur's) own account, to be uppermost in his mind—but the fact is he entered hastily into the war, without a proper estimate of its difficulties and its cost, and he finds himself quite unequal to overcome the one or to meet the other."²²

"Indeed he does not appear to have made up his mind to anything, but to get out of the war somehow or other."²³

In May, 1855, came the heartening news of the Nepalese occupation of the town of Sona Gumba, commanding the approach to the Kuti pass. This added to the Tibetan eagerness for peace. A high Tibetan officer, deputed by the Chinese *amban* at Lhasa, met Jang Bahadur at Jhunga, inviting him to Lhasa so that he could personally thrash out the thorny Nepal-Tibet problems with the Chinese and Tibetan authorities. The overture went abegging.²⁴

Shortly thereafter, in June, 1855, Jang Bahadur returned to Kathmandu along with his brothers, Dhir and Jagat Shamsher, his earlier plan of marching on to Tingri Maidan being wrecked on the extreme difficulty of supplying provisions to the advance bases of the Nepalese soldiers. It was thought wiser to hold on to the fort of Jhunga and strengthen it as a springboard for further advance after the rains.²⁵

In August, 1855, another Sino-Tibetan peace mission came to Kathmandu with the offer of a very nominal amount of money to indemnify the Nepalese war expenses. Jang Bahadur spurned the offer, repeating his demand for the cession of Kerung, Kuti and Tuglakote, or, in lieu thereof, a crore of rupees. He further pointed out that Nepal-Tibet dispute would never be solved until and unless China withdrew from Tibet and recognised the latter's independence. China should retain only a *Vakil* at Lhasa, and so would Nepal. The price of peace was evidently too high, and the Chinese leader of the delegation refused to commit himself to the cession of "a single inch of territory upon any condition whatever." Even more disagreeable was the Nepalese demand for Chinese withdrawal from Tibet. Eventually, however, the stalemate was got over by the Nepalese decision to depute a mission to Shikarjunga in Tibet.²⁶

The Nepalese emissary, Kaji Til Bikram Thapa, started for Shikarjunga, armed with an impressive list of Nepalese grievances. His primary object was to ascertain whether or not the Chinese would make an armed intervention in favour of Tibet. He was also to urge that the restoration

of the old Nepalese territories of Kerung, Kuti and Tuglacote (the territories consisted of five districts Kuti, Chusang, Sona Gumba, Kerung and Jhunga) was the peg on which the issue of peace hinged.²⁷ The price for peace was set deliberately high with the hope that hard bargaining might yield better dividends. Jang Bahadur was now seriously thinking of peace. The earlier enthusiasm was ebbing; concern and worry corroded his characteristic resolution. Discontent was spreading among the soldiers; the *sardars* were in a like mood. There was chronic shortage of provisions; supply was irregular; blinding, cold storm numbed the Nepalese army at Jhunga. Hundreds took to bed with complaints of sore eyes, upset bowels and frost-bitten fingers and toes. Eight regiments had, in fact, returned from the forward areas to Kathmandu.²⁸ The Resident reported,

"I believe not only that Jang Bahadur is really anxious for the termination of the war, but that whatever may happen, the Gurkha army will not move beyond the Tingri Maidan. I do not think that it will advance from Jhunga, and consider it very doubtful whether it will ever retain that fort."²⁹

Til Bikram Thapa had a cold reception at Shikarjunga. His mission failed, the Chinese *amban* resolutely maintaining that no part of the Tibetan territory could be ceded without the express sanction of the Chinese Emperor. The *amban*, however, admitted the justness of the Nepalese grievances. He urged that Nepal should assuage her wrath by accepting a fine of two lakhs and thirtythree thousand kalamohars (a small Tibetan coin), equivalent to about Rupees 50,643, from the Tibetan government. The sum was, in fact, well on its way to Kathmandu along with some costly presents for Jang Bahadur. The Sino-Tibetans further undertook to remit all transit duties on the Nepal-Tibet frontier upon Nepalese subjects trading with Tibet. The Chinese *amban* sternly warned that if the peace overture were not accepted and the Tibetan territory not evacuated, the Chinese army would intervene, ravaging Nepal and reducing its capital to rubble.³⁰

The war situation in the closing months of 1855 was anything but favourable for the Nepalese. Heavy snow had clogged the passes, cutting off the communications between the Nepalese acquisitions in Tibet and their supply depots in the rear. On 1 November, 1855, the Tibetans, 12,000 strong, launched a surprise attack on Kuti and occupied it, killing a large number of its 2,000 Nepalese defenders. The rest of the latter retreated to the fort of Listi. At Kerung, the state of affairs was no better. There, 6,000 Nepalese were holding on grimly for about a week against a Tibetan force, eight times superior in number. Simultaneously, a body of about 15,000 Tibetans suddenly swooped down upon the fort of Jhunga, snapping all communications between it and Kerung. The Nepalese at that fort, 2,500 in number, were trapped, exposed to virtual extinction.³¹ The news of a relieving force, under Sanak Singh, hacking its way through the intervening enemy-infested region was the only ray of hope for them.³² The Humla column under General Krishna Bahadur was in like straits

at Tuglakote.³³ A relieving force was promptly despatched from Kathmandu to Kuti under General Dhir Shamsher, and another contingent to Kerung under General Jagat Shamsher.

Dhir Shamsher reorganised his troops, now about 6,000 strong, at Listi, and promptly relieved the fort of Kuti after a hard fighting, which took a toll of about 1,100 Tibetan lives. It was difficult to retain the fort in the face of renewed attack by the Tibetans, and, hence, Dhir Shamsher had the authority to destroy the fort and withdraw his troops a few miles away from Kuti towards Khassa (in Tibet, situated between Listi and Kuti). Fierce fighting raged at Jhunga; 1,800 Tibetans fell fighting. At long last, Sanak Singh reached Jhunga with his relieving force, on the way making short work of 1,100 Tibetans. The Tibetans besieging Jhoonga took to their heels, crossed the Bhairab Surpur mountains and converged in the environs of Tingri Maidan, vowing to recover Jhunga, a sacred place for all Tibetans. It was, hence, politic for the Nepalese to concentrate their forces on Kuti, the most prized of all possessions.³⁴

This, then, was the war situation; it was evidently far from reassuring. Time had come to take a decision, vital for the nation at large. A grand Darbar was convoked at the palace to plan the future course of action. The nobles were palpably panicky; the military officers were wavering; everyone's heart had sunk. The *Bharadar Sabha* (the Supreme Council) preferred the Chinese peace offer, "comparatively humiliating though they be" to continuing the fatuous and suicidal war. The peace offer appeared to them as a golden bridge to withdraw from an evidently untenable position. Sufferings had far outweighed the gains. Besides, they heard an ominous ring in the latest Chinese admonition. A face-saving peace was far better than utter destruction.³⁵ Even the Resident felt so. Jang Bahadur alone managed to put up a brave face. He exhorted the *Sardars*, galvanised the troops; roundly upbraided those who proposed yielding to such "disgraceful terms" for peace. He had now no illusion about the extreme difficulty of the campaign, but then, obduracy was likely to yield far better terms than weak submission. It was better, he urged, to perish manfully on the battlefield than survive with a stain on national honour. Jang Bahadur pleaded, imprecated, cajoled, thundered. After a wearisome debate, he won his point.³⁶

The war had been launched with much fanfare and parade. To abandon it now without any material gain would lower Jang Bahadur in the eyes of his people. The latter would laugh in their sleeves and hold him accountable for the colossal loss in men, money and morale; it might also give his enemies a handle to overthrow him from power. In short, the war was for him now not only a matter of personal prestige but a plank of survival as the *de facto* ruler of Nepal. His eloquence and resolve carried the day. The dispirited nobles braced themselves up for what they felt a national war. Nothing save a complete rout, they asserted, could

dislodge the Nepalese from their positions in Tibet.³⁷ Resident Ramsay reported this in the following words :

"I attribute the result entirely to the personal power and influence of Jang Bahadur who has evidently made up his mind to carry out the war *coute de coute*, and is able to talk over or to browbeat all who are opposed to his wishes, binding upon the Maharaja and his father to an apparently cordial acquiescence in his plans."³⁸

In December, 1855, Kuti and Jhunga staged several fiercely-fought engagements. The Nepalese got the better of the Tibetans, but only to succumb to General Winter. These successes energised Jang Bahadur; it seemed possible now to enter into the heart of Tibet or at any rate as far as Tingri Maidan, reportedly defended by a force of 16,000 Tibetans.³⁹ He was, however, prepared to conclude peace, but then, only from the commanding position of a victor. Heart was put back among the Nepalese, but the strain on their purse was not relieved. A tax was levied on all landed property to the extent of one-third of its produce or annual value and upon all jagirs of every description. All officers, civil and military, excepting the sepoys, havildars and jamadars, were subjected to the tax. Even the landed endowments to the temples were not spared.⁴⁰ People paid through their nose, but even then the Nepalese purse could not be made long enough to bear the costly war.

CEASE-FIRE AND TREATY

1855 rolled on to a sanguinary close, making, however, the prospect of peace brighter than ever. By now the utter futility of the war had been driven home to the belligerents. It remained for one of them to make an earnest move, and for the other to welcome it. Early in 1856 the Tibetans made some sincere efforts for peace. In January, one Neema Dhundoo, a high-ranking Tibetan officer, offered to come down to the Nepalese post at Jhunga along with the Sethia Kaji's son for peace negotiations. The offer was scouted by Jang Bahadur; Nepal, he firmly declared, will not sheathe her sword except on honourable terms.⁴¹ Another offer followed suit, it being made by the Sethia Kaji himself. The terms offered were that the Tibetans would pay Rupees ten thousand "annually as permanent tribute to Nepal", that transit duties on Nepalese traders would be remitted, that fugitive criminals were to be surrendered by each state to the other, that a Nepalese *Sardar* would be at Lhasa to adjudicate the cases involving Nepalese subjects, that the Sikh prisoners of the Sikh-Tibetan war (1841-42) would be let off by the Tibetan government,⁴² that subjects of one country would be free to move into the other and also to settle there without let or hindrance, that all the prisoners of the present war were to be returned to their respective states, and that the Nepalese would be allowed to trade in Tibet duty-free. Politically advantageous, the terms were, besides, of great commercial benefit to Nepal. The duty-free trade with Tibet would relieve the Nepalese coffer of an annual sum of Rupees

three lakhs as transit duties, as it would further facilitate free export of opium to Tibet.⁴³ The proposed terms would, at any rate, serve as the basis for cease-fire. In fact,

"both countries are evidently desirous of peace though some delay may take place before the Nepalese evacuate their positions in Tibet. I feel pretty confident now that there will not be another campaign."⁴⁴

Jang Bahadur had, in fact, issued orders to stop further recruitment and suspend the raising of levies in the Choubisi and Baisi areas.⁴⁵

The final ratification of the treaty was delayed till March, 1855, due mainly to a trail of mutual distrust. It was difficult for Jang Bahadur to overcome the sneaking doubt if the draft treaty of the Tibetans was not a ruse to gain time, as also to lull the Nepalese to a sense of relief, and make them off-guard.⁴⁶ The treaty, finally ratified, consisted of the provisions included in the draft treaty, together with a Nepalese pledge to help Tibet if she were attacked by some power. If Nepal were attacked by a foreign power, Tibet would "convey all Nepalese property from one place to another within the territories of Nepal", as also to provide her with transportation facilities free of charge for two months and thereafter at the rate paid by the Nepalese merchants to the Tibetans. Both the states further undertook not to molest their subjects who might have helped the enemy state (as the Bhotias of Kerung) during the war. In the preamble of the treaty both the states undertook to "live henceforth in peace and amity and to honour the Emperor of China in the same way as we used to do before."⁴⁷

In April, Nepalese troops began to pull out from the advance posts. The soldiers on return home were given heroes' reception; triumphal arches were built; volleys of cannons sent their reverberations to the farthest hills; the roads of Kathmandu were thronged by people eager to "welcome the victorious countrymen." Jang Bahadur made a suitable speech, referring to his 'hopes' having been 'fully realised' by the 'indomitable valour' of the troops who 'caused the snow to melt and the mountains to bend down their heads', and who 'scattered' the Tibetans 'like a flock of sheep'. Medals were cast; rewards were showered; to cap all, the soldiers were given two months' leave with pay to "recoup their health."⁴⁸

The peace was one of mutual exhaustion. So far as the Nepalese were concerned the war from its very commencement had been unpopular. Geographical obstacles encountered were as great as the drain on the coffer heavy. Resident Ramsay bore this out thus :

"The war has been unpopular since its very commencement and all classes throughout the country has suffered by it in proportion to their means, or it would be more correct to say, out of all proportion to their means... All trade has been severely interfered with and in many parts of the country, even the cultivation of soil

has been partially interrupted. In short, the prosperity of the state has been most injuriously, though perhaps temporarily affected."⁴²

THE BRITISH REACTIONS

In his disputes with Tibet, Jang Bahadur had for some time past been trying to know the British Resident's mind. He had dropped some cautious feelers to ascertain whether or not the British would protect him if China backed Tibet. The British felt that Nepal-Tibet dispute in regard to boundary did in no way directly concern them.⁵⁰ Yet, a state of tension between these states on the northern border of India was far from desirable. Resident Ramsay, hence, advised Jang Bahadur to settle the dispute by peaceful negotiations.⁵¹ By the year 1854, Jang Bahadur clearly saw that his opportunity for an invasion of Tibet had come. He only needed an assurance of British neutrality. In the words of Resident Ramsay,

"The Minister seems fully to understand that the British government will not permit itself to be mixed up in any quarrels that may occur between the Nepalese and their northern neighbours that I cannot help thinking that the real object of his visit (to the Residency) was to find out whether my own government will view with dissatisfaction the circumstance of this Darbar embroiling itself with the Tibetans, or in other words, with China, our relation with that government being in a friendly footing."⁵²

Jang Bahadur at first sought to conceal the real object of his military preparations. He gave out that he had been asked by the Chinese *amban* to send military help to the Chinese Emperor to put down the Taiping rebellion, but that without the permission of the British he did not dare sending the help.⁵³ Later, however, Jang Bahadur made a clean breast of his grievances against the Tibetans whose continued hostility, he declared, had compelled him to undertake a punitive expedition.⁵⁴ But Resident Ramsay could not be tricked. The allegation of Nepalese subjects and the Nepalese mission being ill-treated in Tibet was wholly at variance with the reports he gathered not only from the Kashmiri merchants trading with Nepal and Tibet but also from the leader of the Nepalese mission to China, Bhim Sen Rana himself. The Kashmiri merchants avowed that well-behaved merchants at Lhasa were as secure in person and property as they were at Kathmandu, and that "they meet with no molestation whatsoever."⁵⁵ Bhim Sen Rana personally told the Resident that he had received nothing but courtesy and consideration all along his journey, and that amply provided, as he was, with all amenities, he had nothing to complain of.⁵⁶ The report of the murder of a Nepalese subject at Gartope, which served as the *casus belli*, was also baseless. The Chinese having asked for the Nepalese aid also appeared to the Resident as but a cock and bull story, an artifice to delude the Resident and disarm his suspicion. The frontier dispute has also been satisfactorily settled about a year ago.⁵⁷ It was,

hence, very likely that Jang Bahadur had more bees in his bonnet than he chose to disclose. The real object of the expedition, it appeared to the Resident, was to wrest the lands around Kuti and Kerung in western Tibet, which formerly formed parts of the Nepalese territory, and which had been mulcted of Nepal after her war with Tibet in 1792-93.⁵⁸ The spirits of avarice and revenge were too palpable—the spirits being stimulated by the propitiousness of the time. The Chinese were sorely plagued with the Taiping rebellion, the Tibetans were rent with internecine squabbles; they were restive under the galling Chinese yoke.⁵⁹ The British, too, were pre-occupied with the Crimean War, and, hence, most unlikely to intervene. The pear was now ripe; Nepal would settle her scores with Tibet once and for all; now or never.

The British reaction to Nepalese war-like preparations was one of mingled disapproval and distrust. These military preparations had set off considerable stir and alarm in the border areas of Bengal and Bihar, "the most exposed districts" and "the financial heart of the British Indian empire." The Nepalese military preparations, the Taiping rebellion in China, the reported Russian advance into Chinese Turkestan and the Crimean War in which England and Russia took opposite sides, were all menacing synchronisms. The Supreme Councillors in Calcutta had a sneaking suspicion that Jang Bahadur had some malicious intention. It was as much likely that he would exploit the British embroilment in the Crimea and invade the undefended British districts below as that he would invade Tibet when the Chinese were stewed in the Taiping juice.⁶⁰ Rumour of a combined army of Russia, Persia and Afghanistan about to march against the British in India floated at Kathmandu. Even the otherwise confident Resident smelled a rat.

"General Jang Bahadur", he warned, "may possibly be making more extensive preparations than there is occasion for, on account of our war with Russia, and the belief prevailing here that that power (Russia) is more than a match for us, and that we dread an attack from her upon our Indian frontiers. The Nepalese have an exaggerated idea of the influence of the Russians in Central Asia, and it has been more than once noticed in the records of the Residency that considerable military preparations at Kathmandu have been simultaneous with the existence of reports of an expected Russian advance."⁶¹

He further apprehended that a Nepal-Tibet war would

"materially affect the political aspect of affairs in that quarter" and that "stirring events will follow the entrance of the Nepalese army into Tibet".⁶²

At any rate, the Nepal-Tibet dispute assumed considerable importance in the context of other international developments. War with Tibet, a Chinese protectorate, launched by Nepal, a close ally of the British, was

likely to be exploited by Russia. It was known that China had already made large concessions to the Russians on the Amur river, and that Russia was casting her eyes even farther.⁶³

Lord Dalhousie, the Governor-General, was, however, less panicky. His policy was that of keen vigilance, close interest and non-interference. He admitted that the British government had "no right to interfere and no... interest in interfering" in an issue "which is wholly between Nepal and China". Besides, it

"does not appear calculated in any way to injure the interests of the British government or unduly increase the power of Nepal."⁶⁴

Yet, keen vigilance was maintained. Any further reduction of the armed forces in India was stopped, and an army of exercise was posted at Ambala as a precautionary measure. Keenest watch was kept on the Nepalese troop movements towards Dotee, close to Almora. Intelligence of political events in Tibet and China was collected through the British governor of Hongkong.⁶⁵

Jang Bahadur was allowed to purchase arms and stores from private firms in Calcutta, but was prevented from doing so from the government arsenals in India and England. Lord Dalhousie gave him clearly to understand that,

"The Government of India being in amicable alliance with China, cannot either directly or indirectly encourage or assist the state of Nepal in attacking a province subject to that empire."⁶⁶

As an insurance against any contemplated mischief on the part of Jang Bahadur, he was urged to "tender explanations" of his military preparations, and to keep the Resident posted with the progress of the war. Jang Bahadur heeded this admonition and kept the Resident abreast of all his plans and movements. He also readily agreed to the British proposal of urging the Tibetans to free the Sikhs imprisoned since the Sikh-Tibetan war, 1841-42. Jang Bahadur was evidently eager to ingratiate himself with the British.⁶⁸

In the latter phases of the war, when the Nepalese suffered serious reverses, and when the Chinese *amban* put political pressure on the Nepalese government, Jang Bahadur sought to enlist the British government's help. Jang Bahadur's counsellors urged that, as Nepal was ready to help the British during the Anglo-Sikh wars, the British should come to Nepal's assistance now. The ex-King Rajendra Vikram Shah (Father of the reigning King Surendra Vikram Shah who was deposed by Jang Bahadur in May, 1847.) held that if the British refused to help, no communication relating to the war should in future be sent to the Resident.⁶⁹ Resident Ramsay firmly told Jang Bahadur that "whatever emergency might occur and whatever disasters happen to his troops", the British government would not help him in any way, for

"besides involving a breach of treaty, (such help) would disturb mercantile transactions annually amounting to from thirty to forty times more than the gross revenues of this kingdom (Nepal)."⁷⁰

With great difficulty Jang Bahadur convinced the Darbar that the British would never help Nepal, for their settled policy was to prevent her from being too powerful.⁷¹

The British policy of non-interference in the Tibet-Nepal dispute was influenced by two considerations. Firstly, they had to reckon with the Chinese reaction to the event. Secondly, there was fear of Sikkim and Bhutan being involved. As regards China, the British were relieved to find that, except exerting diplomatic pressure on both the contestants, China did not show herself up; evidently her hands were too full with the Taiping rebellion. Resident Ramsay had always contended that so long as the Nepalese could not rout the Tibetans and enter deep into their territory, China would not make her armed appearance in defence of her protectorate. It was also apparent that Jang Bahadur, notwithstanding his bravado and braggadacio, would not continue the costly war for long. Even if the Chinese did intervene, Ramsay held, Nepal was now strong enough to put up a plucky fight with them. In short, there was little fear of the unhappy incidents of the Nepal-Tibet war of 1792-93 being repeated to the letter.⁷²

The British were keen on localising the war which had spread considerable stir in the neighbouring Himalayan states. Strict vigilance was maintained on Sikkim and Bhutan, particularly when Jang Bahadur was suspected of trying to rope in both these states. The British government were approached for a free passage of the Nepalese army to Tibet through Sikkim, it being the easiest route. The British sternly refused compliance. Jang Bahadur was then suspected of seeking to win over the Raja of Sikkim by offering him military assistance for the recovery of the Sikkim Morung from the British. Sometimes he affected concern that Sikkim was planning to ravage eastern Nepal at the bidding of Tibet with which she had long-standing relations. Dr. Campbell, the Superintendent of Darjeeling, bore strong misgivings about Jang Bahadur's professed fidelity towards the British. He strongly asserted that Jang Bahadur was playing false with the British, and that he had either forged a defensive and offensive alliance with the Raja of Sikkim or failing to achieve that, had threatened to attack his country if he did not allow the Nepalese troops a passage through his territory.⁷³ Dr. Campbell furnished a lot of information about Sikkim and Bhutan's close interest in the Nepal-Tibet dispute; they were in fact acting at the bidding of Tibet with which they had age-old relations, particularly of religious character.⁷⁴ Chinese intervention, with "Russian intrigue and gold", he further warned, was not unlikely.⁷⁵ But these reports of Dr. Campbell carried no weight with the Governor-General. Lord Dalhousie had full faith in Resident Ramsay's assertions that Dr. Campbell's fear was overdone, and that his reports, consequently, were

baseless. It was certain that Jang Bahadur would never risk a war with the British on the score of Sikkim, "a small and valueless province". He was well aware that Sikkim was a British protectorate, and that they would totally disapprove Sikkim's involvement in the war in any way.⁷⁶ Resident Ramsay had already warned him in "courteous but decided language" that

"the British government can never permit Nepal to possess itself of Sikkim, whether permanently or temporarily. It is resolved to act up to the treaties which were long ago framed to that effect."⁷⁷

The invasion of Bhutan by Nepal, as apprehended by Dr. Campbell, was impossible, Ramsay held, without a march through the Tibetan territory, and without the stiffest resistance of the Tibetans. It was absolutely unlikely, Ramsay assured the Government, that Jang Bahadur would invite trouble with the British when he was having enough of it with his northern neighbour.⁷⁸

LESSONS OF THE WAR

The episode was not without some lessons for the British. They noted that Chinese power had waned in parts of Tibet⁷⁹, and that this had aggravated Nepal's expansionist ambitions; these ambitions affected Nepal's relations with her neighbouring Himalayan states; and these relations were matters of great interest for the British. It is the fear of Chinese power in Tibet which had hitherto partially restrained Nepal's ambitions and restlessness. And such restraint was deemed essential to the maintenance of peace and tranquillity in British India's northern frontier. Besides, Nepal was now being ruled by Jang Bahadur. It was likely that he would exploit his friendly relations with the British to achieve his ambitious aims in the area. It was also likely that he would seek British help if China sought to foil his schemes by threatening armed intervention. Hitherto, when relations with the British were strained, Nepal had sought to play the Chinese off against the British.⁸⁰ Now Jang Bahadur could play the other way round. He might cash in on his alliance with the British as a source of strength *vis a vis* China, and also as a shield against the latter. He might, in short, pit the British lion against the Chinese dragon, and reap a rich harvest for his own sake.

It became also clear that the Chinese were as much desirous of peace in the Himalayan region as the British themselves were. Both the British and the Chinese were keen on localising the war; and the war did not assume greater magnitude or greater ramification due as much to the British neutrality as to China's diplomatic intervention. This neutrality and intervention had restraining effect on the belligerents.

The shadow of China fell largely across the peace negotiations between Nepal and Tibet. Nepal took into account China's special relations with Tibet, and this realisation chastened Jang Bahadur's earlier zeal to continue

the war and toned down his demands.⁸¹ The final ratification of the treaty was delayed partly on account of the provision in the treaty which obliged Tibet to send an annual tribute to Nepal. Since Tibet was a dependency of China, she could not obviously send tribute to Nepal without offending her overlord. The stalemate was finally resolved with the Nepalese having undertaken to show the Chinese Emperor the same honour as heretofore. Nepal also undertook to treat Tibet as a sister state having special relations with China. The hard core of the Nepalese demand—namely, the cession of Kutti, Kerung, Tuglacote, Chowur Gumba and Dhakling—was lost presumably under the Chinese pressure. It is doubtless that Chinese protection stood the Tibetans in good stead, while British neutrality let Jang Bahadur down. The British avoided even a semblance of support to Jang Bahadur for fear of bringing China more to the open and thereby aggravating the affair.

It was apparent also that all was not well in Sino-Tibetan relations. There were rifts in the lute. Jang Bahadur's assertions of his having been approached by a section of the Tibetan nobles to help them in overthrowing the galling Chinese yoke might not be given implicit credence, but then, there was a substratum of truth in the reports that the Tibetans, particularly the Khampas of Eastern Tibet, were restive under the Chinese thrall.⁸²

The Nepal-Tibet war also drove home to the British that the Himalayan states of Tibet, Nepal, Bhutan and Sikkim were so related that a major event in one set off disquiet in the rest. Nepal being the strongest of these states, was naturally feared by her neighbours. Nepalese aggressive propensities in the past had made the northern border of India a sensitive area. Restraint of Nepal, the British realised once again, was a compelling necessity for peace and tranquillity in the Himalayan region.

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3. E. Teichman, *Travels of a Consular Official in Eastern Tibet* (Cambridge, 1922) 5 ; W.W. Hunter, ed., *Essays on the External Policy of India by J.W.S. Wyllie* (London, 1875) 192-3.
4. *S.C.*, 30 June 1854, 42-3 ; P. J. B. Rana, *Life of Maharaja Sir Jang Bahadur Rana of Nepal* (Allahabad, 1909) 172-4 ; Oldfield, n. 2, 1, 413-4.
5. Normally the embassy took eighteen months for the journey both ways. The total number of stages between Kathmandu and Peking one way was 176; the distance 2,534 miles. The Tibetans and the Chinese provided everything to the members of the mission as soon as they crossed the Nepalese frontier. The mission's despatch in no way signified political subjection of Nepal to China. It was but a symbol of compliment and deference. B.H. Hodgson, *Miscellaneous Essays Relating to Indian Subjects* (2 Vols., London, 1880) I, 167-73; *M.H.*, Vol., 2, K. 474.
6. Resident (George Ramsay) to Government, 2 September 1854, *S.C.*, 29 September 1854, 23 ; Oldfield, n. 2, 416-7.
7. To the east of the Kathmandu valley there lay 46 small chieftaincies, grouped under two loose confederacies, called *Baisi* (22 States) and *Chaubisi* (24 states).
8. Resident to Government, 2 September 1854, *S.C.*, 29 September 1854, 23.
9. *Ibid.* n. 8.
10. Resident to Government, 22 December 1854, *S.C.*, 26 January 1855, 164.
11. Same to same, 24 January 1855, *S.C.*, 26 January 1855, 44 ; Oldfield, n. 2, 416. Jang Bahadur raised a new army of 14,000 foot and 1,200 horse, and cast 80 light twelve-pounders and 24 six-pounders and a large number of mortars and howitzers adapted to mountain warfare. P.J.B. Rana, n. 4, 175.
12. Abstract Translation of a letter from the Maharaja of Nepal to the Emperor of China, Magh Samvat 1911, Abstract of a letter from the Maharaja to the Chinese amban at Lhasa, Magh Samvat 1911, Abstract of a letter from Jang Bahadur to four Tibetan Kajis at Lhasa, Magh Samvat 1911, enclosed in a letter from the Resident to Government, 15 January 1855, *S.C.*, 23 February 1855, 40-41.
13. Abstract of Jang Bahadur's letter to the four Tibetan Kajis, Magh Samvat 1911, *Ibid.*

14. Resident to Government, 24 January 1855, *S.C.*, 26 January 1855, 44. More than 12,000 persons were promoted to higher ranks, involving an annual expense of 4-5 lakhs of rupees.
15. Same to same, 6 March 1855, *S.C.*, 27 April 1855, 27-8.
16. Same to same, 9 April 1855, *S.C.*, 25 May 1855, 39.
17. Same to same, 27 April 1855, *S.C.*, 25 May 1855, 41 ; Oldfield, n. 2, II, 6-7.
18. *Ibid.* n. 17
19. Same to same, 12 May 1855, *S.C.*, 25 May 1855, 43.
20. *Ibid.* n. 19
21. Same to same, 12 July 1855, *S.C.*, 31 August 1855, 60.
22. *Ibid.* n. 21
23. *Ibid.* n. 22
24. Resident to Government, 22 June 1855, *S.C.*, 27 July 1855, 64.
25. *Ibid.* n. 24
26. Resident to Government, 10 August 1855, *S.C.*, 28 December 1855, 81.
27. Kuti and Kerung originally belonged to Nepal. In 1792 when the Chinese invaded Nepal, the Bhotia inhabitants of this region threw off their allegiance to the Nepalese and sided with the invaders. The Chinese made over these territories to Tibet as an endowment to the Buddhist shrines in Tibet. Oldfield, n. 2, I, 414.
28. Resident to Government, 22 June 1855, *S.C.*, 27 July 1855, 64 ; Same to same, 10 August 1855, *S.C.*, 28 December 1855, 81.
29. Resident to Government, 10 August 1855, *S.C.*, 28 December 1855, 81.
30. Abstract Translation of a letter from Chinese amban to Maharaja of Nepal, September 1855, letter from Sethia Kaji to Jang Bahadur, 22 September 1855, *S.C.*, 28 December 1855, 89 ; Oldfield, n. 2, II, 12.
31. Resident to Government, 6 November 1855, 9 November 1855, *S.C.*, 28 December 1855, 86-7.
32. Oldfield, n. 2, II, 13.
33. *S.C.*, 28 December 1855, 85.
34. Oldfield, n. 2, II, 14-7 ; P.J.B. Rana, n. 4, 183-7.
35. Resident to Government, 8 November 1855, *S.C.*, 28 December 1855, 88.
36. *Ibid.* n. 35.
37. Jang Bahadur's letter to Sethia Kaji, 24 October 1855, *S.C.*, 28 December 1855, 88.
38. Resident to Government, 8 November 1855, *S.C.*, 28 December 1855, 88.
39. Same to same, 24 December 1855, *S.C.*, 25 January 1856, 73.

40. Same to same, 18 January 1856, S.C., 28 February 1856, 38.
41. *Ibid.* n. 40.
42. The British government urged Jang Bahadur to effect the release of the sikh prisoners held in Tibet since Zorawar Singh's campaign in western Tibet, 1841-2. On Nepal's role in this war see K. Mojumdar, "Nepal and the Sikh-Tibetan war, 1841-2", *Bengal: Past and Present* (Calcutta), LXXXII, I (January-June 1963) 12-25.
43. Resident to Government, 15 February 1856, S.C., 28 February 1856, 40.
44. *Ibid.* n. 43.
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46. Resident to Government, 2 April 1856, S.C., 30 May 1856, 26.
47. For the text of the treaty see C. U. Aitcison, *Treaties, Engagements and Sunnads Relating to India and Neighbouring Countries*, XIV (Calcutta, 1929) 49-50 ; P.J.B. Rana, n. 4, 189-90.
48. *Ibid.* n. 47, 191.
49. Resident to Government 15 July 1856, S.C., 29 August 1856, 45 ; S.C., 27 July 1855, 65 ; 30 November 1855, 81 ; 28 December 1855, 81. The war cost Jang Bahadur a sum of Rupees 2,683,568/-. *Subba Buddhiman Vamsavali (Nepali)*. There are two registers dealing with the war in *Madan Puraskar Pustakalaya* (Patan, Nepal) and in the *Commandari Kitab Khana, Jangi Phant, Kathmandu*.
50. Note of Lord Dalhousie, 18 October 1852, P.C., 22 October 1852, 62.
51. P.C., 22 October 1852, 61. During his European tour Jang Bahadur sounded the British if they would help him against Tibet. O. Cavanagh, *Reminiscence of an Indian Official* (London, 1884) 110.
52. P.C., 22 October 1852, 61.
53. S.C., 26 May 1854, 50.
54. S.C., 29 December 1854, 32.
55. S.C., 26 August 1854, 50.
56. Resident to Government, 6 May 1854, S.C., 26 May 1854, 50 ; S.C., 29 December 1854, 27.
57. S.C., 26 May 1854, 50. "Jang Bahadur has never made any secret of his desire to meddle in Chinese affairs, or of the part he would take were he invited to interfere by the Manchus or even by the *ambans* of Lhasa—he would side with either against the other." Resident to Government, 24 October 1854, S.C., 29 December 1854, 27.
58. "Puffed up with hopes of the success of the rebellion (Taiping rebellion) under Tientich, the Nepalese built lofty castles in the air about throwing off the galling yoke of the Chinese and annexing a considerable portion of Tibet to their own dominion." P.J.B. Rana, n. 4, 175 ; S.C., 25 August 1854, 50-55.
59. "...the progress of affairs in Tibet for the weakening of the Chinese supremacy although not so rapid as was expected last year...is stated

to be all favourable for a foreign invasion, but the Tibetans are not now no more than they were before at all favourable to the Gurkhas. They could not, however, alone resist them and there are not many Tartar troops in the country at present." Dr. Campbell to Government, 10 October 1854, S.C., 27 October 1854, 46.

"The affair regarding the injustice done to Newars (a community in Nepal, mostly merchants and artisans) could not have reached the pitch but for the decadence of Chinese power in Tibet, providing the Gurkhas to assume a threatening policy." Dr. Campbell to Resident, 10 October 1854, S.C., 27 October 1854, 48.

60. "I do not regard the fact of his preparation of snow shoes and the like as elucidating his design any better than his friendly assurances to our Resident do. But I believe we may more safely judge of what he will not do from what is now passing in the Crimea than either from the nature of his preparations or from the explanations. And if the rebellion is put down this winter in China, I think it probable that he will sell off his magazines, snow shoes and all in spring." Grant's Minute, 7 November 1854, S.C., 29 December 1854, 28.
61. Resident to Government, 5 August 1854, S.C., 25 August 1854, 50.
62. ".....if the Nepalese troops once cross the border it will materially affect the political aspect of affairs in this quarter, for the Gurkhas will be too glad permanently to extend their territory beyond the snowy range if they thought they can do so with impunity, and if their expedition fails and they are driven back in their own country, attempts will probably be made to follow them and to punish their aggression by an invasion of Nepal." Resident to Government, 6 May 1854, S.C., 26 May 1854, 50 ; 25 August 1854, 50.
63. John Bowring, Governor of Hongkong, to Lord Dalhousie, 6 July 1854, S.C., 25 August 1854, 58.
64. Minutes of Lord Dalhousie, S.C., 25 August 1854, 52, 54.
65. S.C., 25 August 1854, 52, 58.
66. S.C., 29 September 1854, 25.
67. Minutes of Lord Dalhousie, 12 May 1854, S.C., 26 May 1854, 50.
68. S.C., 30 November 1855, 81.
69. S.C., 30 November 1855, 58. The ex-King disclosed that he had earlier been assured by a former Resident, Mr. Hodgson, that if he (ex-King) lent him Gurkha soldiers, the British would help him in the occupation of Tibet. *Ibid.* Recruitment of the Gurkhas in the Indian army was the most absorbing interest of Hodgson, see Hunter, n. 2, 104-9 ; K. Mojumdar, "Recruitment of the Gurkhas in the Indian Army, 1814-1877", *The Journal of the United Service Institution of India* (New Delhi) LXXXIII : 391 (April-June 1963) 145-6.
70. S.C., 30 November 1855, 58. "I hope I need scarcely observe that upon every occasion upon which the possibility of our ever taking part in this war has been hinted out, I have deprecated it in the strongest terms, have said that however much we may regret the occurrence of hostilities so near our frontier between the two states with which we are on terms of amicable alliance, no consideration will induce us

to break through our long-established line of policy or to join in a war in aid of any one state by committing a wanton breach of faith to another." Resident to Government, 8 November 1855, S.C., 28 December 1855, 88.

71. S.C., 30 November 1855, 88.

72. In 1792 the regular Gurkha army was not more than 1,600-1,800 men, while the Sino-Tibetan forces totalled more than 10,000. The Gurkha rule had not been consolidated then, nor did their resistance to the Chinese evoke a national spirit of solidarity among the people who hated the Gurkhas as invaders of their land. But now (1855-56) Nepal could muster nearly two lakh soldiers for what was regarded by the people as a national war. In the Tibetan campaign in May 1855, 56,500 men were employed as soldiers. S.C., 30 November 1855, 77-81, 88.

73. S.C., 30 November 1855, 84 ; 27 October 1854, 46, 48.

74. The Raja of Sikkim, at the bidding of the Lhasa authorities, closed all the routes connecting Sikkim and eastern Nepal. S.C., 30 November 1855, 84 ; Campbell to Government, 17 May, 25 May 1855, *Nepal Residency Records*, Vol. 9.

75. S.C., 30 November 1855, 81-2, 91-7.

76. S.C., 29 December 1854, 31-2.

77. Minutes of Lord Dalhousie, 20 October 1854, S.C., 27 October 1854, 50. By the Treaty of Titalya, 10 February, 1817, the British undertook to protect Sikkim from foreign aggression. Aichison, n. 47, Vol. XII, 58-9.

The British assured Jang Bahadur they would prevent Sikkim from invading Nepal. S.C., 29 September 1854, 23.

78. S.C., 30 November 1855, 81-2 ; 29 December 1854, 31-2 ; 27 July 1855, 64.

79. Secretary to Superintendent of Trade, Hongkong, to Secretary, Foreign Department, India, 15 September 1856, S.C., 31 October 1856, 76.

80. During 1814-46, Nepal made a number of attempts to enlist Chinese support to her anti-British conspiracies. The Anglo-Chinese hostilities in 1839-42 saw also the climax of Anglo-Nepalese hostilities. China, however, did not send any help to Nepal.

81. Resident to Government, 15 July 1856, S.C., 29 August 1856, 45.

SUPPLY SYSTEM OF WELLINGTON'S ARMY IN INDIA

BY D. D. KHANNA*

TURNING over the volumes of Wellesley Papers in the British Museum, London, I came across a very interesting note¹ written by Major-General Arthur Wellesley (later the Duke of Wellington) the commander of the British forces in Deccan against the Marathas in 1803. It deals with his own developed system of supplies to the army under his command. It also gives some details of the different supply system prevalent in Northern India, where the army was directly under the command of Lord Lake, the then Commander-in-Chief.

To appreciate this system of supplies, it is necessary that one should also be familiar with the nature of the difficulties which the British army in India had to face, when operating against the Marathas. A few illustrations from the writings of different military commanders of that period will be helpful in this direction.

William Henry Tone commanding a regiment of infantry with Peshwa in 1798 wrote to another brother officer that the Maratha country was of great natural strength, full of mountains and defiles, the entire area being defended by fortresses, which were reserved as depots. He thought that no country was better calculated for the purpose of defensive war, and felt confident that the Marathas in their own country were impregnable. About the difficulties of procuring grain in the Maratha country he wrote that the cultivator could never be sure of his output, as the Maratha army, when on move, was as destructive as locusts. The consequence was that there were no public stores or granaries, and with the scarcity of rain the chances of famine could never be ruled out.²

Lieutenant-Colonel James Skinner, the famous commander of the irregular cavalry under Lord Lake, has narrated, in his *Memoirs*, an interesting incident relating to the problems of supplies in those days. Once his corps was directed to work hard in the Doab to remedy the scarcity of grain and procure it from wherever it was to be found. He used to go out in the morning, plunder the villages and send in whatever he could lay hold of; but it seldom exceeded the day's consumption, with the result that the minds

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1. British Museum European MSS. 13776. Folios 97-105 A part of this note dealing with Deccan is also published in Wellington's despatches.

2. *Some Institutions of Maratha People* by Tone W.H., London, 1799, pp. 20.

of the soldiers became so unsettled, and desertions so common again, that the troopers on duty were found galloping over to the enemy from their posts; and, in order to prevent such shameful desertions, Lord Lake was forced to place sepoy with each trooper vidette, with orders to shoot the trooper if he should move towards the enemy.³

Major-General Arthur Wellesley, in one of his despatches, dated 24th July, 1803, reported to the Governor-General that "the whole of the Maratha territory is unsettled and in ruins. Holkar's armies consumed the produce of last year, and, owing to their plunder and extortion, entire districts were depopulated and the habitations of the people destroyed."⁴ The Governor-General also at a later date, on 17th August, 1804, expressed his fears to Lord Lake in these words: "When the country is overrun by an enemy such as Holkars, the supplies from the country cannot afford a certain resource. The Banjarees also in such a case afford, but a precarious supply."⁵

From the nature of the country and the Maratha technique as mentioned above it can be understood that the most difficult problem which offered itself for solution by the British Commander was that of supply and transport, perhaps the most important question in all operations of war, and it is noteworthy that it was to the details of this matter that Arthur Wellesley devoted the most careful attention in his Indian campaigns. He not only found out Mysore bullocks which could trot six miles an hour and carry his supplies over long distances but also planned for the safe movements of convoys to their destination. He gave top priority to the problem of timely collection and regular supply of grains to the troops. When the operations in the Deccan were still on, he wrote to the British Resident in Mysore (on 12th October, 1803) that "The crops have failed in this country this year, so that there is every reason to expect a great scarcity, if not a famine...your object should be first to keep your markets well supplied...in order that you still might have it in your power to supply the army."⁶

To minimise his dependence on supplies from long distances, and to inculcate the spirit of initiative in his troops, Wellesley not only restricted the use of different variety of grains from time to time, but also issued orders to his junior commanders to procure grain from the local sources. One of his orders read as follows:—

"The Officers commanding corps and the Heads of the departments are requested to make the followers bring their forage for the cattle. Small guards are due to be sent with the foragers and they are to

3. *Memoirs of Lieut.-Colonel James Skinner* edited by J.B. Fraser, London, 1851, Vol. I, pp. 49.
4. *Despatches of the Duke of Wellington*, edited by Colonel Garwood, London 1864, Vol. I, pp. 573.
5. *Despatches of Marquess Wellesley* edited by Mont. Martin, London 1836, Vol. IV, pp. 192.
6. *Despatches of the Duke of Wellington*, edited by Colonel Garwood, London 1864, Vol. I, pp. 405.

see that they get what may be required and what is taken is paid for. The excuse that the inhabitants will not sell their forage will not be allowed, they have been informed that they must sell what is required, and if the forage be refused, it must be taken and the price for it laid down."⁷

Apart from taking those precautions for the timely collection and safe transportation of supplies Arthur Wellesley felt that this problem cannot be finally solved unless a proper system of procurement and distribution is strictly adopted. To achieve this aim he laid down the details of a system, which enabled his army to go to very great distance from the sources of supplies. It is this system which will form the main part of this article.

According to the Wellesley's system the Army was classified into four groups:—

- 1 Europeans
- 2 Native Troops
- 3 Horses of Cavalry
- 4 Followers

Europeans: To ensure proper supply of special provisions for Europeans, a Commissary of provisions was appointed, who could indent the requirements from the public stores. The supplies which could not be procured from the stores were purchased directly from the bazar. The quantity of provisions indented or purchased were so regulated as to last two to three months, and the quantity indented at a time was meant to last for five days only. The idea was to keep perfect control over the grain position in the camp. Carriages were also provided to the Commissary of provisions to procure and transport both grains and provisions.

In Bengal, provisions and grains for European troops were procured through agents who purchased them from bazar. The agents arranged their own carriages to transport the entire supply, except Rum, for which carriages were provided.

Native troops: The Native troops were issued grains by the Commissary of *grains*. When the army was assembled, a quantity of grain to last the troops (including the Europeans) for two to three months was issued from the public stores to the Commissary of *grains*. Whenever the Commissary of *grains* made an issue, it was his duty to replace it either by drawing again upon the public stores or by purchases in the country or through the bazar. Carriages to transport grains were also allotted to the Commissary of *grains*.

In Bengal, native troops were supplied grains through the medium of bazar and no arrangement was made to store the grains in public stores.

7. *Supplementary Despatches and Memoranda of the Duke of Wellington* edited by his son, India, London 1859, Vol. IV pp. 41.

Horses: To look after the proper and regular supply of gram for the horses, a grain agent-general was appointed whose duty was to ascertain the correct numbers and draw such quantity of grain from the public stores so as to last for a given number of days; viz., 40, 50 or 60. The grain agent-general was also responsible to transport it for delivery to the quarter-master of the regiment. The quarter-master had, under his charge, bullocks at the rate of one per horse, each of whom carried grain to last the horse 15 days. The grain agent-general's duty was not only to deliver the required quantity to the quarter-master, but was also responsible to refill the issued quantity, either by drawing further from the stores, or by making purchases from the bazar or the countryside.

In Bengal this supply was made through an agent who was allowed a deputy to assist him. This deputy was normally an officer of the regiment, who was also incharge of the camel and was given some cash. The purchases were made through Banjarees or other dealers of the country. The agent normally stocked things for two months. Wellesley's arrangement in Decan to provide a bullock for each horse was better and solved many problems of regular supply and transportation.

Followers: Followers had to make their daily purchases from the bazars attached to the camp. The bazars were regularly supplied through an organised system. To ensure regular supplies at reasonable rates, the bazars were placed under the charge and superintendence of an officer called the Superintendent of Supplies. (In North India this officer was called Commissary of bazars.)

Supplies to the Bazar were made by Banjarees and Biaparries. Banjarees were a class of carriers who used to trade by transporting commodities from one part of the country to another. Sometimes they purchased goods with their own money, while at the other times they were given advance by the company. They also transported goods by receiving transport charges. The Biaparries were normally attached to bazar and supplied grain after procuring from nearby places. The main function of Superintendent of supplies was to ensure full and safe supplies to bazar and also to look after internal police and security arrangements in the camp.

In the event of these supplies being cut off, it was usual for the commanding officer of the army to order the Commissary of grains to issue to the Superintendent of supplies any quantity of grain that may be required to supply the consumption which fell upon the bazar. The Commissary of grains on return of normal conditions used to refill his stores from the bazar. The grain agent-general at times was also required to issue grain to the Superintendent of the bazar when that article was required for officers, horses and cattles.

CONCLUSION

In this manner did Wellesley's army meet the problem of supply. The camp stores were always kept complete and supplied to the

bazar in emergency, while the bazars in normal days supplied to the camp stores.

By adopting this system of supply Arthur Wellesley could become independent of the country for the procurement and transportation of supplies and succeeded in foiling the Maratha tactics, by which their cavalry used to ravage the country, until want of provisions compelled their enemy to retreat, followed him up with that same cavalry while in motion and surrounded him with Infantry and Artillery when he halted. The adoption of this system of supply alone gave Wellesley confidence, and he was able to carry on his campaign during a famine, and chose, as a preferable time for a Maratha war, the opening of the rainy season. In brief, by leaving nothing to chance, and by thinking out every detail beforehand, he was able to organise a victory.

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BOOK REVIEWS

BIOGRAPHY AND MEMOIRS

Diary of a Black Sheep by Colonel R. Meinertzhagen (Oliver & Boyd, London, 1964) 364 p. Price 42sh.

The Colonel has had a distinguished career as a soldier, traveller, intelligence officer, ornithologist and writer. Readers who expect to be treated to scandalous exposures from the Colonel's past will be disappointed. The title which the author has chosen for his Memoirs is most misleading.

These memoirs deal with childhood influences; with the sadism of a prepschool master; and the lack of understanding and love shown to the author by his mother, who once referred to him as the 'black sheep of the family'—hence the title!

The account of childhood relationships is situated against the background of a wealthy Victorian household at the end of the 19th Century. Much light is thrown on the social history of England of that period, and there are delightful glimpses of the family and distinguished friends—Beatrice Webb, her husband, Rhodes, Herbert Spencer, Huxley, Darwin, Florence Nightingale, the explorer Stanley and the Kaiser.

E. A. V.

Gallipoli to the Somme : Recollections of a New Zealand Infantryman by Alexander Aitken (Oxford University Press, London, 1963) 177 p. Price 30sh.

The author is a man of unusual genius. He is Professor of Mathematics in Edinburgh University, one of the leading mathematicians of the day, a Fellow of the Royal Society, a talented amateur musician and a composer. The Professor's memory is legendary. Apparently he can remember without effort, strings of figures and formulae, and after a single reading, the names and initials of a new class of thirty-five boys without consulting the list again. In his book, he tells of one similar feat of memory, when the majority of his platoon were killed in action and the platoon nominal roll was lost, how he was able to recite the regimental numbers and names of every man in his platoon.

It is forty-six years since he wrote the first draft of the book which is a contemporary account by a young and sensitive volunteer who did his duty and miraculously survived as a private soldier, sergeant and then as a commissioned officer, till wounds sustained at the age of twenty-one, put him out of battle. It is unfortunate that the map which has been designed to fold out, has been incorrectly placed, and thus cannot serve as an easy reference.

The book is written with clarity, compassion and literary grace and is an epic of devotion and sacrifice. Readers will find Professor Aitken's

account of one year in the life of a New Zealand infantryman, 1915-1916, a small masterpiece and deeply moving.

E. A. V.

Petiot, Victim of Chance by Ronald Seth. (Hutchinson, London, 1963) 208 p. Price 21sh.

Ronald Seth adds a new book about a mass murderer, who himself confessed having murdered 63 persons. Ronald Seth was in Paris as a British agent in 1943 and 1944, and he claims to have first-hand knowledge of the case.

Born in 1897, Marcel Petiot was awarded the diploma by the Faculty of Medicine in Paris in December 1921. He started his practice in the town of Villeneuve-Sur-Yonne. In 1927, he was married to Georgette Lablais.

In the chapter on the career of Marcel Petiot, Ronald Seth refers to a number of cases of stealing and violence in which Petiot got involved from time to time in his early life.

In March 1944, police discovered the remains of dismembered human bodies, in a private house owned by Dr. Petiot. Dr. Petiot evaded trial for two years, but in 1946, he was caught and tried. He was charged with the murders of 27 men and women. Petiot himself admitted 19 of these charges but denied eight of them. He claimed to have killed forty-four more persons, who he maintained were German collaborators, informers or agents. Dr. Petiot was found guilty and was guillotined in May 1946.

Ronald Seth has argued that justice was not done to Petiot. He thinks that Petiot did not murder all these persons alone. He was a member of a group and he did it in collaboration with his group. But during his trial he did not name the group because he was afraid that the Communists would do harm to his wife and son.

The book is one of its own kind. It presents the case of Dr. Petiot in the historical setting. The writer has, wherever found necessary, given touches of the political and social conditions in France, and glimpses of the German occupied parts of France. In the chapter on trial of Petiot he has beautifully described the legal structure in France as compared to British legal system. All these things combined with the literary talents of the writer make the book quite a piece of literature.

While defence of Petiot gives the reader an impression of Ronald Seth's treatment of the subject without bias, he does not give the impression of being very consistent and logical in the presentation of his arguments. Petiot was guillotined not because he was a victim of chance but because he was a criminal. To me Petiot's defence and the arguments given by Ronald Seth in defence of Petiot seem very flimsy. I feel that Petiot was a man of pervert nature. If, for example he committed murders in collaboration with the group, and for the purpose of collecting money for his group then how do we explain the disappearance of his maid Louissie. He was also sexually pervert as is clear from the disappearance of the maid and Denise Dotia and from the further evidence of smaller

limbs in the heap of dismembered bodies at rue Lesueur. Even from the quotes of his books, it is evident that he did not have a very serious view of life. He considered it a game. The earlier such pervert natures are disposed off, the better.

Pages can be written on this book, but that is beyond my field as a reviewer. I think the book will be very popular for the information it gives.

R. D.

Peter the Great. Emperor of all Russia by Ian Grey (Hodder and Stoughton, London, 1960) 505 p. Price 35sh.

Peter was the first Russian ruler ever to cross the borders of his State to visit a foreign country. He travelled through Europe, studied shipbuilding, gathered new ideas and put these into practice on his return to Russia. He established a regular army, created a navy, started the first public hospitals, printing houses and newspapers; revised the coinage and alphabet; instituted educational and economical reforms; won wars and almost single-handedly, forced his country to adopt modern western ways.

The author faithfully captures the atmosphere of 18th Century Russia and, without malice or sentimentality, paints an objective and clear picture of Peter the Great in his varied roles: the terrified child; the man who falls in love with a peasant girl and makes her Empress; the father betrayed by his son; the creative genius; the roisterer; the physical giant; the Emperor of All Russia; soldier; sailor; labourer; daring innovator and architect of a nation. That he could have been all this, despite the pomp and holiness that traditionally accumulated around a Tsar, is by itself a remarkable feat, which well entitles Peter to be called the first modern Russian.

Ian Grey's book is of particular interest to readers who seek to find a historical relationship between today's Russia of space-ships, and the old, serf-ridden Muscovy.

E. A. V.

Military Strategy : Soviet Doctrine and Concepts edited by Marshal V. D. Sokolovsky, with an Introduction by Raymond L. Garthoff (Praeger, New York, 1963) 396 p. Price \$ 6.50.

Some books are best read for what they do not say, and this collection of lengthy essays by upper-rank Soviet officers belongs in this category. The book itself is an event; its editor proclaims it to be the first comprehensive book on strategy published in the U.S.S.R. since 1926, although, as Raymond Garthoff indicates in an excellent introduction, this is not quite true, but the claim itself underlines the importance the Soviets give to the collection.

At great length (and with considerable repetition), the contributors to this work lay out the Soviet image of a great many aspects of military strategy: the history of modern warfare, the Marxist-Leninist approach to military problems, Soviet and Western strategies, and the Soviet approach to defence policy-making and execution. There is little doubt that a more detailed and more accurate picture of each of these subjects can be found in the many works of non-Russian scholars and students of military affairs. If one wanted, for example, to find out the relative strength of

the strategic missile forces of the U.S. and the U.S.S.R., one would turn to a number of contemporary works by American and British scholars, for one will not find the figures in this book. What one *will* find is an attempt to reconcile and adjust Soviet military doctrine to the incredibly rapid changes in strategic and tactical warfare brought about by the introduction of atomic weaponry. Because of doctrinal limitations and a late start in the understanding of many of the intricacies of contemporary strategic warfare (although the increased study of Western works such as those by Brodie, Kissinger, Kahn, Osgood, *et al* may change this), the book omits a great deal which a comparable Western study might include. The great value of the work is in letting the reader see how the Soviet military mentality operates, and have a glimpse at its patterns of thought and rationalization, for these run continuously throughout all of the studies. One of the most important of these patterns is an oscillation between the "laundry list" approach to modern warfare, in which each "principle" of war or each military factor is exhaustively listed and described (morale, technology, surprise, leadership, resources, manpower, etc.) on the one hand, and on the other hand, a very flexible expediency, derived largely from Lenin's shrewd and generally accurate reading of Clausewitz. For example, the "first principle" of Soviet military organization is described as the use of "all branches" of the military, yet changes in the relative importance of the branches are admitted (p. 234). What causes the changes? Very little is said about the most important of all questions. It is a separate but important question as to whether this obliteration of the middle between dogmatic assertions and sheer expediency (always, of course, in the name of the people and Party) is a reflection of Russian or Communist thinking; if it is the latter, it might explain some of the discontinuity between the words and deeds of other Communist states in recent years.

In two crucial areas of military strategy, the co-authors have very little to say and nothing original to add to the literature created by American and Chinese writers and practitioners. The treatment of the technicalities and intricacies of strategic nuclear war is simplistic propagandizing; the possibility of war by accident *is* now recognized (although characteristically the fictitious insane pilot is described as an American; he could just as easily be a fanatic Russian, Briton, or Frenchman now, and in a few years, possibly anybody), but very little is suggested as to how the nuclear powers can explore the considerable area of mutual agreement and reduce the danger. Also, the treatment of non-conventional wars and wars "of national liberation" does not do justice to the realities of warfare in the contemporary world. In both these spheres of military strategy, the Russians probably have a great deal more to say than is in this book (no doubt there is a Soviet equivalent to the denigrated RAND Corporation and Special Warfare schools in operation), but it is not Soviet policy to reveal contemporary thinking on these very sensitive areas; if any pronouncements do come, it will probably be from the political leadership.

Altogether, this book is one of the most important of the few public documents of Soviet military and strategic thought; it should be required reading for any who wish to understand how the Soviets justify their weaknesses and their strengths: for an accurate assessment of these weaknesses and strengths, however, one must turn elsewhere.

S. P. C.

WAR AND PEACE

Warfare in the Enemy's Rear by Otto Heilbrunn (London : George Allen & Unwin, 1963) 231 p. Price 30sh.

Otto Heilbrunn's latest study in the field of guerilla and special warfare can be welcomed as a valuable contribution to the theoretical and empirical study of warfare, although it is hardly a "systematic approach to the study of forms of warfare...characteristic of the time we live in." (from the Foreword). What the book is, in fact, is a survey of the many varieties of non-conventional forces which have been raised in especially the last thirty years, with brief and fairly accurate summaries of the effectiveness of these forces and their relevance to the problems of warfare today. As good as the former studies are, they do not provide the proper data for any but the simplest generalizations on the role of particular varieties of special forces and their problems in contemporary warfare; for one thing, they are largely based on World War II experience, and barely cover the events in Indo-China, Malaya, the Philippines, etc., where innovations both in technology and ideology have added new dimensions to unconventional war (making it, in fact, quite conventional). For example, Chapter Nine, "The Air Effort in the Rear," is based very narrowly on a brief study of the role air-power played in the re-occupation of France; from it no serious discussion of the relative advisability of air force control over Special Forces and *vice versa* can be supported, although this is what is attempted (pp. 140-41). When read in conjunction with any good study of contemporary trends in non-conventional warfare, the defects, however, become bearable.

The first part of the book consists of a survey of recent unconventional forces and their tasks; the two cannot be considered separately, and the success of any particular type of force cannot be usefully gauged apart from the task allotted it and the context in which it operated. Heilbrunn surveys the actions of the special forces of the U.K. (Commandos, Long Range Desert Group, Special Air Service, Special Boat Service, Popski's Private Army, Chindits, etc.), of the U.S. (Rangers, Marauders, Special Service Force), and of Australia, New Zealand, Free France, Germany, Japan and others. The book is extremely valuable if only for its description of these forces and the tremendous variety of tasks outside of the "normal" scope of warfare that they carried out.

The problem of raising, maintaining, coordinating and controlling these groups is thoroughly covered in later sections (although perhaps again with not enough allowance for recent innovations). Many of the difficulties encountered in operating these forces are recounted: some humorous, some tragic (as in the Burmese operations when Allied Forces under separate commands failed to support each other out of sheer lack of information of each other's presence). Heilbrunn justly devotes considerable attention to the problem of the desirability of setting up special forces for particular jobs, as compared with the alternative of training regular troops on an *ad hoc* basis; there are dangers and advantages in both alternatives, and there are a host of variables (such as cost, efficiency, probability of use, effect on morale, relationship to strategic political policy, and flexibility) which must be examined in any specific situation.

Had certain sections of the book which deal with these fundamental problems been developed more thoroughly (the discussion on guerillaism vs.

professionalism is tantalizingly brief), and had the author concentrated on fewer illustrations in greater depth, this study of a vital subject might have more frequently risen from the level of the taxonomic to the dynamic.

S. P. C.

Prisoners of War by R. C. Hingorani. (N. M. Tripathi, Bombay, 1963)
327 p. Price Rs 30.

Prisoners of War may be said to have come into prominence primarily since World War II, when not only the numbers involved rose to tens of thousands, but also significantly larger numbers changed sides and fought against their own countries. This was especially so amongst the Russians who fought in the German army although amongst the Chinese of the pre-Communist era this was no uncommon trait. World War II also brought to the fore atrocities on PsW, and these were highlighted by reports of the Japanese using PsW for construction of the 'Death Railway' in Siam. Prisoners of War escape stories, too, gained wide currency, and some even became 'best sellers'. Shortly afterwards, the Korean war brought to the fore another aspect of PsW—the novel one of prisoners refusing to go back to their own homes on repatriation. Reports of Brain Washing, indoctrination, and the like were also made and, although received with considerable scepticism at the time, were found to be correct though divested of much of their mystery on subsequent evaluation. Since then, there has been another novel feature in relation to PsW—the "unconditional" release of Indian prisoners by the Chinese after their "unilateral" withdrawal.

These many factors have heightened public's interest in Prisoners of War, and these can be said to be a ready market for an exhaustive and informative book on the subject.

The book under review is therefore welcome. Its author is a legal luminary—Dean of the Faculty of Law at the University of Gorakhpur, and the book was originally in the form of a thesis submitted to the Yale Law School. It is therefore but natural that the discussion on the subject of PsW is based on a mass of literature, mainly on the legal aspects relating to prisoners of war in the context of "the laws of war". Some interesting points are brought out in this connection especially in relation to who should be accorded PW status, and whether the provision of free maintenance of prisoners by the side which holds them is practicable.

From the point of view of a military person, and also those who are more interested in the practical aspects of the subject, however, the book leaves much to be desired. The first point which the author has not taken into full consideration is the change of view most of the contestants in recent and likely future wars have adopted in so far as PsW are concerned. They are no longer to be considered the flotsam and jetsam thrown up by the storms of war but even in captivity they are meant to continue the struggle "by other means". Similarly, PsW held by them are pliable material on which the continuation of the war "by other means" could be considered normal. It is suggested that these practical aspects are the end-product of the bi-polarisation of forces the author points to time and again, and in this context the legal aspect of treatment and conditions for PsW needs to be looked at afresh, since, it may be correct to say that these have come to the foremost specifically since the 1949 Geneva Convention on PsW was initialled.

Further, there are some glaring examples in the book which indicate to the military reader the author's lack of touch with matters military. Dealing with "Welfare", the author wonders at the possibility of monthly medical examination of PsW (P. 143). Perhaps he is not aware of monthly medical examination being a standard practice in almost all armies. Similarly he advocates long walks for prisoners: "In order to prevent such developments (mental instability) it becomes desirable if the prisoners were sometimes taken out to smell the fresh air away from the sight of barbed wire (P. 142)!!! He states elsewhere that the Indian army does not maintain any form of denominational worship, forgetting the long established religious teachers (recently combatanised) in our army. These points and others, it is suggested should easily be rectified if the author would care to get closer to matters military.

It is on this note that this reviewer would like to end. Recently there have been some heartening attempts for us in this country to read about our own military problems—and these in the modern context extend over an immense field, whether they be legal or logistical. In many cases, the reasonably well informed reader soon finds out, the out-of-step thinking of our authors, separated as they have been for long by barriers of thought and habit. Is it not time that in our democratic set up this should end, both by the services being more accessible and for serious students of military problems—in their wider context—making greater effort to come to know the service realities.

A. M. S.

WORLD WAR II

Strike Hard, Strike Sure by Ralph Barker (Chatto and Windus, London 1963) 204 p. Price 21s.

Many books have been written about the exploits of the Bomber Group in the Second World War. They have treated the Bomber as a weapon of war; they have discussed in great detail the strategy and tactics of its employment; and they have described the deadly terrorising effects of its attacks. But surprisingly little has been told of the men who flew these Bombers. In *Strike Hard, Strike Sure* the author has set out to immortalize the pilots and the crew whose "devotion to duty in the face of overwhelming odds is said to be unsurpassable in the annals of the Royal Air Force."

In recounting these incredible true stories of valour and sacrifice this book again brings to the fore the horrors of a total war. Take the first story, *Daylight Over Augsburg*, for instance.

The vital target was the M.A.N. Diesel Engine Works, the largest diesel factory in Germany, believed to be producing half the total requirements of submarine engines. In a fantastic, almost impossible operation, twelve Lancaster crews were sent more than 500 miles deep into enemy territory by day to deliver a pin-point attack. The target was not only reached but it was considerably damaged. And in performing one of the most gallant, courageous and outstanding feats of the war, only five out of the twelve crews lived to tell the tale.

There is the poignant and moving story of the suicide mission to destroy the *Maastricht* bridges. There is the account of the daylight *Bremen* raid where the indomitable Hughie Edwards won a V.C. to add to his

D.S.O. and D.F.C. There is yet another exciting account of *Gibson's* Dam-Buster Raid. And lastly there is the tragic and deeply moving story of the attempt to liberate the *Amiens Prison* inmates by bombing the prison walls—a story which has immortalised the name *Pickard of Picardy*.

The stories are told with compassion and feeling by an author who knows flying and who already has to his credit two successful books about the RAF—*Down in the Drink* and *The Ship Busters*. They are told in a simple lucid and straight forward style. They are comprehensive in detail, articulate and alive in description, and tense and absorbing in their narrative.

The book is well produced, with a number of plates. It is a fascinating collection for all those who are interested in the dare-devil heroism of the Air Forces of World War II.

S. V.

Unconditional Surrender by Anne Armstrong (Rutgers University Press, New Jersey, 1961) 304 p. Price \$ 6.50.

Although it is almost certain that History will prove Franklin D. Roosevelt as one of its greatest leaders (as H. G. Wells has predicted in his '*Fate of Homo Sapiens*'), yet there has been a visible build-up of effort to denigrate him. The book *Unconditional Surrender—The Impact of the Casablanca Policy upon World war II* is a very able effort in that direction.

Miss Armstrong quotes Clausewitz, that "War is a continuation" essentially, of policy, but by "other means" than diplomacy alone. She goes on to paint a single-minded demoniac President, with a nature similar to that of the crippled professor in "The Wax Museum". The cornerstone of her argument is that the War could have been stopped after the fall of Stalingrad, at any time, because the Germans knew that, from then on, victory for them was impossible. Many German Generals and senior Diplomats were not only aware of this but would have been happy to help topple Hitler. Unfortunately, according to her, only six days after the fall of Stalingrad, President Roosevelt blustered forth with that awful expression, once used by Gen. Grant; and then, so fell in love with the sound of it, that he could not see reason thereafter. She declares that after this announcement, at Casablanca, the whole object of victory was lifted to a moral plane of completing an eventual Metamorphosis of the German man and mind. This fatally departed from the strict aim of continuing policy by other means.

Miss Armstrong also criticises General Marshal and the American General Staff for going ahead with unconditional surrender and ignoring the more canny and 'realistic' advice of Winston Churchill. In fact, she says that the American Generals felt that all through, Britain was always more emphatic in pursuing a policy that was more Empire-oriented and less in direct keeping with the common Allied interest. This, she says, was bad. Miss Armstrong suggests that had the President himself been a less superficial thinker and taken more advice from Winston Churchill, the war may have ended earlier, with less loss, and to the Allied advantage.

The author has gone to great pains to quote from those who then said and those who now pronounce that, 'Unconditional Surrender' was

no ordinary error; but a historical blunder of the greatest magnitude, without which the course of world history would have been so much the better; not to mention, so much easier for the big to guide. In her own support, that attractive but often wrong military theorist Captain B. Liddel Hart, is profusely quoted. One reference to an unpublished memorandum of his dated October 1, 1943, is fascinating. It says that "unfortunately the only state which could provide a stable element in Europe and could effectively serve as a buffer against Soviet expansion was 'the one we are aiming to smash.'" This philosophy—indeed—represents the author's main line of thinking.

In determined support of her theory, Miss Armstrong gives a most painstaking and detailed survey of views and personalities, organisations and plans which were made ready in Germany to overthrow the Nazis and to make peace with the West. But, alas, unconditional surrender stood in the way, bolstered largely by two men and the American General Staff only; the President of the United States and Morgenthau, Secretary of the American Treasury.

Sadly, the author points out, Stalin only paid cursory heed to the President's slogan. She goes on to indicate that not only did he try to make a separate peace, but all Russian propaganda was based on separating the German people from the Nazi party. The author also shows that Churchill was against it. That Churchill consulted his war cabinet before the Casablanca conference seems to make no difference to her, and she absolves all except Roosevelt.

To a dispassionate oriental reader not interested in the supremacy of the United States or Russia, and least of all of the British Empire, it seems that while Miss Armstrong has husbanded her arguments well, she has been carried far out to sea by the current of her own desire to prove certain aims and ambitions of her own country in the context of the present. The main burden of her thinking is that had it not been for Roosevelt, the pennants and the flags of the "free world" may have fluttered nearer to the Oder than it does, and that Berlin might have been a gay 'Night-Club-filled' city, instead of having an East End and a West End. In fact, that her country might have had leadership over a larger surface of Europe than it has.

It occurs to the reader that if Miss Armstrong had wished to make a real analysis of, rather than argue, the case against unconditional surrender, she would have tried to analyse more closely, and thus project more clearly, the thinking that was behind President Roosevelt's mind. Had she done so the first thing she must have realised was that upto the time that the U.S.A. came into World War II, the Monroe Doctrine was still strong in the hearts of US citizens. Thus, the President, in guiding his country into a war at all, did so in the teeth of opposition from John Foster Dulles and many others. In fact, the basic move to come into the war, was, firstly, to be able to control the Pacific against Japan, and only secondly to counter spreading of the scourge of Nazism and Fascism. The second aim, therefore, was inevitably more emphatically moral. The writer also should remember that the aim of war as enunciated by Clausewitz is "the destruction of the enemy forces in the field".

It is admitted in the book that Woodrow Wilson's efforts and the peace after World War I was a failure. Can it then, therefore be

asserted that a peace with Beck as head of State in place of Hitler, would have been a roaring success? As long as the sources of power available to Hitler remained in the hands of others, would Germany's ability to make war not have remained? Who would have been able to control History; much as Liddell Hart would have liked to free such energy in an eastward direction.

While all this settlement of a separate peace was going on, Stalin would not have been a silent spectator. He would have, as a very alert strategist, denounced his allies and would then certainly have marched to the Atlantic. It is certain that nothing could have stopped him from doing so. The German forces could not have been re-deployed or re-inspired after the fall of Hitler, and would have fallen into disarray overnight. Italy and France would have welcomed their eastern liberators, and the situation may well have been similar to that obtaining immediately after the fall of the Czar earlier.

The tragedy of the situation, therefore, is not that the allies wanted unconditional surrender, but that President Roosevelt was no longer there to attend the Potsdam Conference, to guide the immediate post-war policy of the U.S.A. and, indeed, of the world. It is beyond doubt that he was a great visionary, a great lover of freedom. He saw a world of co-existence, devoid of predatory policies, in which the United Nation would be the forerunner of one world. He saw peace as indivisible.

Unfortunately none of Roosevelt's schemes could materialise; because of the Truman Doctrine, which all serious students know to be a doctrine of Truman as preached to him by Sir Winston, and because of the Marshall Aid plan which brought Europe into the American orbit, and made for the U.S.A. a backwater out of the Pacific.

If one is to see History correctly, one must confess that the most unfortunate aftermath of the war was the acquisition by the west of the atom bomb, and the whole dream of peace and human prosperity being once more subjected to power politics.

The wartime picture thus seen by the United States President and the General Staff could not have been free of some caution about British Imperialism; still less could they have foreseen the direction in which the world policies are now being guided. Least of all could they have entertained the hope for a vast and rapid resurgence of the basis of war-making ability in Germany, *i.e.*, The solid growth of convertible modern industry. To put it more precisely, in the thinking of Sir Percy Corbett, when he wrote for the Royal Institute of International Affairs in 1941 on "war aims and post-war plans", Miss Armstrong summarises it as follows:

"The basic requirement of a first-class military power at the time of the Second World War were a large and adaptable engineering industry and the capacity to produce the highest quality of industrial goods in mass quantity." This fact has not altered today; thus making the future uncertain indeed.

E. H.

ARMY

People's War, People's Army : The Viet Cong Insurrection For Under-developed Countries. By Vo Nguyen Giap (Praeger, New York, 1962) 217 p. Price \$ 5.00.

This "book" is a compilation of pamphlets and short papers by the leader of the North Vietnam forces, an intellectual academic Communist who mastered the art and science of guerilla warfare, and who went on to lead his forces to victory against the French, and who is now a Vice-Premier and Defence Minister of the North Vietnam regime, as well as being a member of the Politburo of the North Vietnam Communist Party. Originally published by the Foreign Languages Publishing House (Hanoi) in 1961, it has been reproduced in facsimile along with an analytical introduction by Roger Hilsman (formerly one of the leading guerilla warfare experts in the U.S. State Department) and a short profile of Giap by Bernard B. Fall. Briefly, the book joins the small but growing body of literature on guerilla and unconventional warfare available in the non-Communist world written by Communist leaders for the enlightenment and instruction of revolutionary movements around the world—its most notable recent companion being Che Guevara's account of the Cuban Revolution.

Once one cuts through the inevitable distortions and exaggerations in the work (for it is as much a piece of exhortation and justification as it is a manual for instruction), several points of Giap are relevant outside of the Indo-Chinese context.

The first is the very close link between military and political leadership in the North Vietnamese guerilla operations, and the close interrelation between the military and political factors in the conduct of the campaign against the French. As little as possible is left to chance in the initiation of a campaign; if there is the possibility of defeat, an engagement is postponed rather than risked; but if victory is possible, assured, nothing is spared in terms of effort or lives in securing it. The guiding principle is that the psychological effect of defeat is crucial in a guerilla operation, where confidence in leadership is one of the main props of discipline. Conversely, the impact upon the opposing army is just as important, for a string of defeats inflicted by an enemy which is numerically inferior and which is equipped with crude or captured weapons can sap the will of any force.

A second important point of Giap is the eternal aggregation-dispersion dilemma. In fighting a guerilla war a regular army must ultimately choose one of two broad strategies: it can disperse and attempt to hold as much territory as possible, sealing off local support and supplies from the guerilla enemy; or it can concentrate its strength, trading land for fire-power, and try to annihilate the guerilla forces in a series of battles. In the first strategy—as Giap points out—the guerilla's optimum course of action is to nibble away at the enemy; in the second, it is to consolidate its hold on the countryside and avoid pitched battles. Only a qualitative increase in mobility can bridge the gap (such as the introduction of helicopters on a massive scale), but even this may be ineffective without the requisite confidence and initiative.

There is much else in this book which deserves attention, and it could well be read with profit by anyone involved in or interested in the initiation

or suppression of guerrilla conflict. It presents a way of looking at warfare which redefines the very meaning of warfare; war is looked upon in *depth*, not only in terms of territory, land, and strategy, but in terms of the relative will power of the opponent: Giap stresses the necessity of looking at an enemy's weaknesses as much as his strengths; if one presses hard enough in the areas where the enemy is sensitive (and this may be a moral or psychological area as well as a geographical area), one need not match strength with strength.

It is a devastating way of looking at warfare and conflict, but it can be made less effective by an awareness of the principles which underlay it.

S. P. C.

Peninsular Preparation: Reform of the British Army, 1795-1809 by Richard Glover (Cambridge University Press, 1963) 315 p. Price 40sh.

When England went to war with France in 1793, her Army was weak as a result of years of neglect of training and discipline, poor organisation and supplies and political interference in the selection of its officers. To these handicaps were added a cumbrous system of political control and inept strategy. The result was defeat in her continental campaigns and the loss of respect of both her allies and her enemies.

This book is a record of the transformation of a weak and despised British Army into an effective force which lent authority to British diplomacy. The author studies this transformation in detail. He examines the army's constitution, its equipment and training, its system of promotion, its discipline and the manpower problem. Professor Glover's book is a contribution not only to our knowledge of British military power and diplomatic history, but also a valuable guide to the origin of some of the systems from which many of our common practices have been derived.

Reading history is profitless unless we can relate the past to the present. Although the majority of the defects then prevailing in the British Army have since been remedied in most modern armies, some of the weaknesses discussed, nevertheless, bear painful similarity to current problems facing the Indian Army and, thus, this book is of value to those who are willing to profit from the mistakes and efforts of others.

E. A. V.

Scotland The Brave by John Laffin (Cassell, London, 1963). 191 p. Price 30sh.

This book by an Australian is not a military "history" in the strict sense of the word, although "potted" versions of the history of the twelve regular Scottish Regiments are dealt with. Although it contains vivid and informative accounts in the life of 'the Jocks', it is not a mere miscellany of Scottish "militaria". Let not these negative assessments put any reader off, though; for, this book is a rare and moving tribute to the Scottish soldier.

There is a growing tendency in modern times, where the uninitiated look with amused tolerance, if not actual contempt, at regimental traditions, "martial classes", and especially at the clannishness of fighting men. To them, it appears improbable that fighting battles under modern conditions has anything to do with what has been so often dismissed as

"regimental trappings". To their logical minds, mere statistics of men and weapons are enough. In Indian conditions, they fear that any importance given to regional or class differentiation might break up the hegemony of an integrated India. What is overlooked, however, is that fighting, even in the present times, ultimately comes down to the exercise of wills of the opposing commanders, and the physical clash of their forces, especially, the "teeth" arms. In this clash, what counts most to the man at the "sharp end" is the confidence he has in his comrades, the *josh* with which he is inspired by his immediate leaders, and the faith he has in himself to get the better of his foe. At that juncture the higher ideals he might have been imbued with, take only a subliminal place in his subconscious. What count, then, are those same Regimental "trappings", so contemptuously "pooh—poohed" by the arm-chair critics, because they are the physical embodiments, so tangibly palpable to the fighting man in the heat of battle. Reminders of these are the things which arouse in the soldier the latent reserves of courage, endurance, fortitude, and, above all, of self-sacrifice without which no critical battle can be won.

In these the Scottish soldier has been endowed with more than most; with his kilt, his pipes and over all, his clannish personality. The Black Watch Cairn near Tobruk in the Desert, or the words 'H.L.I. Scotland for Ever' rudely cut in the rocks at the foot of Dongala Gorge near Karen, the tablets in many an inconspicuous church in India, are but a few of the many thousand such which bear mute testimony to this. As the author says, "Scottish regiments—and Highland ones in particular—owe much to their character to the way in which the chiefs disciplined and trained all the men of their clans, long before regiments, as such, were thought of. A chief had absolute power and between him and every member of his clan was complete confidence and devotion. It was so complete, in fact, that its depth is difficult to appreciate today." Except that the very presence of this confidence and devotion in a unit raises it above the common cut, and makes it one which may be destroyed but not defeated. The kilt and the pipes have put some extra fire into the Scot to fight. "Generals and Colonels have known this, the pipers know it, and the men know it, when, for some reason, a Scottish regiment has been deprived of its pipes in battle, it has fought with less zest." Many are the Victoria Crosses which pipers have won.

The Jock has fought in most parts of the world. The author takes us through country after country, and almost the entire gamut of English and British Empire history. There are interesting photographs of Scottish soldiers in recent wars, and reproductions from more ancient plates. The anecdotes are amusing and instructive. Above all, this book will be pride and joy not only to the countless Scottish soldiers and their admirers, but should be an asset in every military mess and library for the light it throws on the basic military virtues of the fighting man, whether he be a hillman from the North of the British Isles, or a fighting man from any part of the world, and is especially recommended for young infantry officers for its lucidity of exposition of the fundamentals of one of the most important aspect of his craft.

A. M. S.

HISTORY

Secret Diplomacy, Espionage and Cryptography 1500-1815 By J. W. Thompson and Saul K. Padover (Ungar, New York, 1963). 290 p. Price \$ 6.50.

The book is advertised as "a documented study of diplomatic intrigue, illuminating the machinations of master conspirators through three centuries of European History." And to say the least, it fulfils all expectations. Bordering on a historical research study and yet reading like a spell-binding thriller, the book traces modern diplomacy from its start. The authors "bypass the ballroom for the backstairs" and take the reader into the inner recesses of plots and conspiracies which are an essential pre-requisite to peace conferences, negotiations and pacts. *Enroute*, they provide fascinating sketches of the underhand side of European Diplomacy. According to one of the authors himself, there are two facets to the book. "One is entertainment, and the other serious history. Some of the authentic episodes here recounted surpass fiction. At the same time, it is documented history. It is a study of the development of a relatively neglected aspect of diplomacy—that of institutionalized spying and coded communication."

The authors are eminently suited to deal with the subject. The late Prof. Thompson was a professor of European History and, in the course of his research work, he had collected in his files rare material on espionage and double-dealing. S.K. Padover was Prof. Thompson's student and is interested in Diplomatic History of the Eighteenth Century. He has also held wartime "Secret Diplomacy" posts with the U.S. Federal Communication Commission, the OSS, and the Army Intelligence. Between themselves, they could read eight foreign languages including Polish and Russian and hence they could easily decipher the material in the Archives. Mr. Padover is now the Dean of the School of Politics at the School for Social Research in New York.

Starting from the birth of modern diplomacy in Venice, the book takes one through the Turkish courts, the Venetian Service; the Royal English ceremonials and the caprice of the Italian heads of state. It is interesting, for example, to learn that the Popes were as false and double-dealing as the Monarchs; that murder and intrigue and lying were kingly arts; that even Catherine of France and Elizabeth of England were cruelly gifted in conspiracy and were ruthless in diplomatic technique; and finally that the main job of accredited ambassadors could be described in the three words, "Lie, Spy and Bribe." "An Ambassador," to quote the famous words of Sir Henry Wotton, "is an honest man sent to lie abroad for the good of his country."

The book contains a chapter on statecraft and defines the qualities and qualifications necessary for a good envoy. It is full of surprising revelations, about famous historical figures like Cardinal Richelieu, Oliver Cromwell and Talleyrand the French Genius, who plotted behind three different French Regimes. Of spying, by fair means or foul, the authors say, "what had been mere expedients in the sixteenth century and a necessity in the seventeenth, became an institution in the eighteenth...Every Foreign Office set aside large funds for bribery."

It is an absorbing study and contains an appendix on Cryptography and Codes. The diction is fluent except in places where the linguist authors choose to interpose Latin, Italian or other foreign quotations in the text. This detracts from the smoothness of the language.

The book is well illustrated and boldly printed, but the price is on the high side. S. V.

INTERNATIONAL RELATIONS

Peking and Moscow by Klaus Mehnert, trans. from the German by Leila Vennewitz (Weidenfeld and Nicolson, London, 1963) 522 p. Price 50sh.

This large study comprises several books : and all of them are excellent. In a little over a hundred pages each, the four Parts of *Peking and Moscow* compares and contrasts the social and cultural backgrounds of Russia and China, their respective revolutionary history and Party organizations, their relationships with each other, and their interactions in the world political system.

In the existing literature, *Peking and Moscow* will take a place somewhere between the "Inside" books and the specialist studies of Sinology and Kremlinology. Mehnert draws heavily upon the existing scholarly literature, but he has added a deep sensitivity to the two cultures and societies of Russia and China and a wealth of personal experience in both countries. And, unlike many other foreign visitors (especially to China), he is not blinded by wishful thinking.

Communism was not inevitable in either country, argues Mehnert, and according to Marxist doctrine, Russia and China were the least likely candidates for Communist-led revolutions. Once established, however, Communist parties in both nations have shown an amazing flexibility in relating doctrine to unusual reality; and as industrialization has proceeded in the Soviet Union, doctrine has had to undergo serious change. This reviewer finds a curious parallel in the development of the two leading Communist states in the world with the development of the main democracies: each passes through a period of bumptious independence which irritates and annoys well-established states (even of the same ideology), but with a growing experience in international affairs, a growing self-confidence, and a mastery of fundamental social and economic problems, each becomes more "responsible" (if that is the right word for it), and more amenable to negotiation and discussion. China today is where Russia was in 1918: ruthless methods are being employed in the name of doctrine and the face of appalling social need which seems to those in power to justify any action, and doctrine is flexible enough to sanction it. Of course, there is no guarantee that China will "mellow" before it "blunders into a disaster either of social upheaval or foreign adventure. The course of action available to those who are threatened by either of the Communist states, according to Mehnert, is limited: any attempt at meddling in their internal affairs or their relationships with each other may result in driving them closer together; there is a great deal of scope for agreement, especially with the Soviet Union, but the best course of action is to remain as prepared militarily and diplomatically as is necessary to convince them that overt action is futile. Beyond that, he wisely urges a continual striving to present as effective and attractive model as possible to the people of each country; the Cold War(s) between the Western powers and the Communist powers, and between the other nations such as India which are not members of either camp but which are threatened—especially by China—may not be won or be lost by military defeat, but by material and moral example; here is a sphere where a country must be true to itself before it can convince either friend or foe of its special claim for attention.

S. P. C.

CORRESPONDENCE

Correspondence is invited on subjects which have been dealt in the Journal, or which are of general interest to the Services.

To

The Editor of the U.S.I. Journal, New Delhi.

Sir,

1.

ECONOMICS AND MORALE IN THE ARMY

At present, the country's need for a modern and efficient Army of sizeable strength is most pressing. Steps have already been taken by the Government to expand and modernise the Army through new raisings, indigenous production and procurement from abroad of modern and more effective weapons and equipment. As a result, the Army today is better than ever before. It will be stronger and still better tomorrow.

Any Army's strength is adjudged by its organisation, weapons and equipment, standard of training, physical fitness and morale. However, its fundamental strength is built more on morale than any other factor enumerated above, especially so in the modern set up of warfare where high standards of skill and intelligence are the basic needs. Once an Army is equipped with desired weapons and equipment, it then devolves on the soldier to use them effectively.

The question now arises as how best to enlist, train and retain skill of desired calibre in the Army. The problem is rather tricky and closely linked with economics and morale. A pay scale enabling a soldier to provide for himself and his family in a manner comparable to his civilian counterpart in the private and public sector and of the same age group and standard of skill, is extremely necessary for a contented and efficient Army.

Within the service conditions, the soldier has little scope of financial adjustments. Working overtime does not earn him any additional emoluments. He does not get any extra money in the form of bonus. If he has to be content with his meagre pay, and limited scope for promotion, it may lead to discontentment and frustration. First opportunity and he is prepared to leave the Army for a civilian job with better prospects.

The hard Corps of officers and men in the Army is always there. But this dedicated group is much smaller as compared to the overall strength and not enough to maintain the combat effectiveness of the institution.

The pay scales should be such that they act as incentive to the right material and are sufficient to meet the cost of living in a decent way and

spare the soldier of his domestic worries so that he can whole heartedly Concentrate on his profession. Concessions like free medical treatment, free rations and allied services do not retain their original weightage in the modern set up, in light of similar concessions and schemes being granted to his civilian counterpart in the private and public sector. With the rapid mechanisation and development in the country, scope for employment in the civil has increased at a fast pace. This is, further, likely to aggravate the problem of enlistment of right type of personnel in the Army and subsequently their retention in the absence of adequate incentives and limited scope of promotions.

Increase in the basic rates of pay of officers and men, introduction of command, staff and technical pay and allowances for officers, regrouping of trades and greater stress on efficiency and integrity may go a long way in solving the problem.

LIEUT. COLONEL K.K. SHARMA

HQ Tech Service Group,
TRIMULGHERRY PO,
SECUNDERABAD-15.

2.

ANNUAL CONFIDENTIAL REPORTS

Lieut. Colonel J. Robelloe's Article on Annual Confidential Reports in January-March, 1964, issue of the Journal is very timely, thought-provoking and should attract the attention of the authorities concerned. The fallacies brought out in the present system are undisputedly the facts known and experienced by all.

I however disagree to the introduction of Part III in the suggested system. It shall defeat part of the aim for reviewing the present system of initiating and processing the reports. It will continue the difficulties of the command of language and the desire on behalf of the initiating officer to please his subordinates, thereby making Part IV irreconcilable with Part III. I suggest that we should follow the US Army's method of initiating the Efficiency Reports whereby the officer reported upon is not shown his report at any stage. It is incorrect conception that by reading his weakness, the officers can improve upon them. Firstly the reports at present hardly mention the weaknesses. Secondly there is the whole year for the initiating officer to indicate to his subordinates their weaknesses and for them to improve upon.

Part IV of the proposed system is a well thought-out form. I would, however, recommend the study of the form of officer-like qualities used for final term cadets at the Indian Military Academy by the Military Secretary's Branch. It is a tabulated form which works out mathematically the officer's overall ability and can be most useful both for the initiating officer as well as the Military Secretary's Branch.

There is yet another very disturbing feature creeping up in the method of reporting upon officers and writing of remarks by the senior officer in the chain of command. Officers records of service are invariably being called for from the units by the initiating officers as well as senior officers. To initiate a report or write any remarks based upon the officer's previous

appointments and record of service is very disappointing and must be eradicated. Lieut.-Colonel J. Robelloe has suggested a good solution for it.

ARMY HEADQUARTERS TRAINING TEAM
DHQ PO, New Delhi
17 Jun 64

MAJOR K.C. GHAI

3.

EMPLOYMENT OF SOLDIERS FOR NON-MILITARY TASKS

I would like to add the following to the very informative article written by Col. Vas in your issue of Oct-Dec. '63.

The reasons for using soldiers for non-military tasks are as under—

- (a) The projects before the Government for housing the Army are invariably turned down.
- (b) In forward areas there is an acute shortage of civilian labour.
- (c) Even though emergency works are sanctioned, the MES is not in a position to undertake work as no contractor comes forward in concessional areas. Work by "directly employed labour" is not possible due to shortage of civilian labour.

The worst affected arm no doubt is the Corps of Engineers. It is not uncommon to find field units of active formations on construction work for most of the time. In order to overcome the difficulties given in para 2, the following is suggested:—

- (a) Encouraging visits by top civilian officials to areas where construction projects are required so as to convince them of the necessity by 'seeing and believing'.
- (b) Planning at a very high level to import civilian labour both skilled and unskilled, if necessary by force.
- (c) Using pressure on contractors to bring them to forward areas.
- (d) Formation of pioneer battalions whose tasks will be to construct and maintain living accommodation including bunkers and defences in forward areas. These pioneers need not be given special training. The supervisory staff could be from the Corps of Engineers including MES. The terms and conditions of service of Pioneers must be improved.
- (e) Failing (a), (b) and (c) above, one field company from divisional engineers and one rifle company from each battalion of the brigades to be on construction work in cycles of six months.

MAJOR S.C.N. JATAR

22 FIELD COY.
C/o 56 APO
18 Jun 64

SECRETARY'S NOTES

MEMBERS' ADDRESSES

Copies of the Journal posted to members are sometimes returned undelivered by the Post Office with remarks such as 'the addressee has been transferred,' etc. This appears to be on the increase and the only way to rectify it is for members to drop a line to the Secretary whenever their addresses change due to promotion, transfer, etc. It is of the utmost importance that the Institution should have the up-to-date addresses of all its members.

ANNUAL SUBSCRIPTION

Although the Institute's year 1964 is now six months old, I regret to say that there are still many members who have not yet paid their subscription which was due on the 1st January last. Could I therefore request all members who have not yet paid their subscription for the current year, to let me have their remittance by return of post.

NEW MEMBERS

From 1st April to 30th June 1964 the following members joined the Institution:

ANAND, Captain V.B.	CHAUDHRY, Captain J.K., ASC.
ANAND, Major V.K., Engineers.	DEKA, 2/Lieut N., 1 GR (Life)
ATMA SINGH, Captain	DES RAJ DALMOTRA, 2/Lieut.,
BADHWAR, Major V., 5 GR (FF).	JAK Rifles.
BANERJEE, Captain S., Signals	DEV, Major D.R., Signals.
BARKAT RAM, Major (Retd.).	DHILLON, Squadron Leader A.S.
BARRETTO, Major C.A., Engineers.	IAF.
BHAGAT, Major R.S., Artillery.	DHILLON, Captain K.G.S.
BHASIN, 2/Lieut H.M.S., The	GROVER, Captain J.K., Signals.
Garh Rifles	GUPTA, Major A.C., Engineers.
BHA'IA, 2/Lieut N.N., The Kuma-	GUPTA, Major S.C., The Garh
on Regiment (Life)	Rifles
BHATNAGAR, Captain N.S.	GURBAKHSI SINGH, Captain,
BHATT, Major B.L., Artillery.	AOC.
BOBDE, Pilot Officer M.K. IAF.	GURCHARAN SINGH GUJRAL,
CHATURVEDI, Major P.C., The	Major
Sikh Regiment.	GURDIAL SINGH, 2/Lieut., JAK
CHATWAL, 2/Lieut M.S., Artillery	Rifles.
	GURNAMSINGH, Major, Artillery.

HARKIRAT SINGH, Captain, Guards.	PANNU, Captain P.S., The Rajput Regiment.
HAZRA, Captain P.K., AMC	RACHHPAL SINGH, 2/Lieut., JAK Rifles.
ISSAR, Captain S.K., The Kumaon Regiment (Life).	RANGANADHAN, Shri N.
JAGDISH CHANDRAN, Captain	RAM PAT, Major.
JASWANT KUMAR, 2/Lieut., The Bihar Regiment.	RAO, Shri C.L.
JASBIR SINGH ALANG, 2/Lieut., EME.	ROY, Commander M.K., IN.
JATAR, Squadron Leader J.N., IAF.	SABHARWAL, Captain G.S., Signals.
KAINTAL, Flight Lieut K.K.S., IAF.	SANDHU, Major A.S., The Dogra Regiment (Life).
KALLEY, Major K.C., The Sikh Regiment.	SANDHU, Major D.S., Artillery.
KANDAL, Major M.S., Engineers.	SATHESAN, Captain M.
KAPUR, Captain R.C., Artillery.	SATPAL SINGH, Captain, 3 Cavalry.
KASHMIR SINGH, Captain.	SEHGAL, Captain R.N., Engineers (Life).
KHANNA, Major S.C., Engineers.	SHAMSHER SINGH, Captain, Guards.
KRISHAN LAL SAHNI, 2/Lieut., Engineers.	SHARMA, 2/Lieut J.C., JAK Rifles.
KULKARNI, Captain R.V.	SHARMA, Major R.N., Engineers (Retd.)
LODHIE, Air Commodore A., IAF.	SHARMA, Captain V.D., Engineers.
MAKKAR, Major J.S., Engineers.	SINGH, Major B.N., The Kumaon Regiment.
MALIK, Major S.S.	SOHAN SINGH, Major.
MALL, Major B.S., The Garh Rifles.	SONDHI, Major NIRMAL, Artillery.
MEHTA, Major Y.P., Artillery.	SUR, Lieut.-Colonel, S.L. (Retd.)
MENON, 2/Lieut K.P.C., ASC.	TRIPATHI, Captain S.P.M., 63 Cavalry (Life).
MOHAN, Major A.C.	ULLAL, Major B.V., AOC.
MUKERJI, Captain D.K., 8 GR.	WADHA, Captain S.S., Artillery.
NARANJAN SINGH, Major, Artillery.	WALIE, Major P.N., AOC.
PANDIT, Major H.L., Signals.	WIDGE, Captain V.N. Artillery.

Twelve officers' messes and institutions were enrolled as subscribing members during this period.

PRINCIPAL ADDITIONS TO THE LIBRARY

April-June 1964

BIOGRAPHY AND MEMOIRS

<i>Title</i>	<i>Author</i>	<i>Year</i>
Ace with One Eye	F. Oughton and Comdr. V. Smyth	1963
Eve of War 1933-41: Volume IV Of Men, Years—Life	Ilya Ehrenburg	1963
The Fate of Admiral Kolchak	Peter Fleming	1963
Fighter over Finland: Memoirs of a Fighter Pilot	Eino Luukkanen	1963
The Memoirs of Lord Chandos	Oliver Lyttelton V. Chandos	1962
Punjab's Pioneers in Freedom Fighters	M.L. Ahluwalia and Kirpal Singh	1963
Soldier True: Life and Time of Sir W. Robertson	Field Marshall Sir William Robertson	1963

WAR AND PEACE

Guerrilla	Charles W. Thayer	1963
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SECOND WORLD WAR

Sixty days that Shook the West	Cyril Falls	1963
A Spy in Rome	Peter Tompkin	1962

INTELLIGENCE

Craft of Intelligence	Allen Dulles	1963
Great moments in Espionage	Ronald W. Clark	1963
Holiday for a Spy	Bruce Graeme	1963

NAVY

Jane's Fighting Ships 1963-64	Raymond V.B. Blackman <i>Comp.</i>	1964
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AIR

Jane's All the World Aircrafts 1963-64 John W.R. Taylor *Comp.* 1964

PSYCHOLOGICAL WARFARE

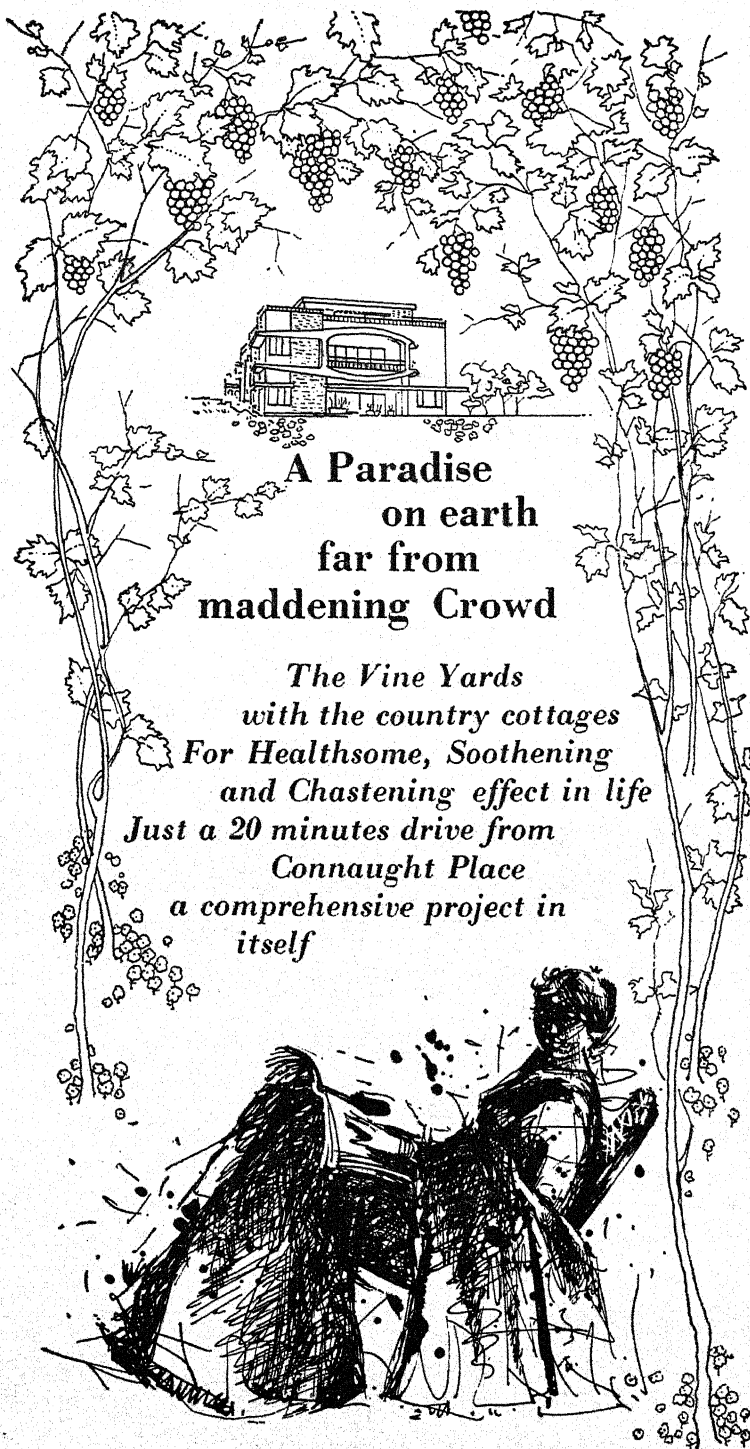
Aerial Propaganda Leaflets: A Collector's Hand-Book	J.C.W. Field <i>Comp.</i>	1955
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Crystalizing Public Opinion	Edward L. Bernays	1961
The Fifth Weapon: A Guide to Understanding What the Commu- nists Mean.	Robert S. Byfield	1960
Introduction to Mass Communications	Edwin Emery and others	1960
Manipulation of Human Behaviour	Albert D. Biderman and others <i>eds.</i>	1961
Modern Public Opinion	William Albig	1956
Pattern of Panic	Joost A.M. Meerloo	1950
Propaganda, Communication and Public Opinion	B.L. Smith and others	1946
Public Opinion in Soviet Russia: A Study in Mass Persuasion	Alex Inkelcs	1962
To Win the Mind of Men	Peter Grothe	1958
Truth is our Weapon	Edward W. Barsett	1953
Understanding Public Opinion	C.D. Macdougall	1952

ASIA


New States of Asia: A Political Analysis	Michael Brecher	1963
Pakistan : The Consolidation of a Nation	Wayne Ayres Wilcox	1963

HISTORICAL

Story of the Victoria Cross 1856-1963	Sir John Smyth	1963
British Policy towards Sindh up to its Annexation 1843 (2nd ed.)	P.N. Khera	1963
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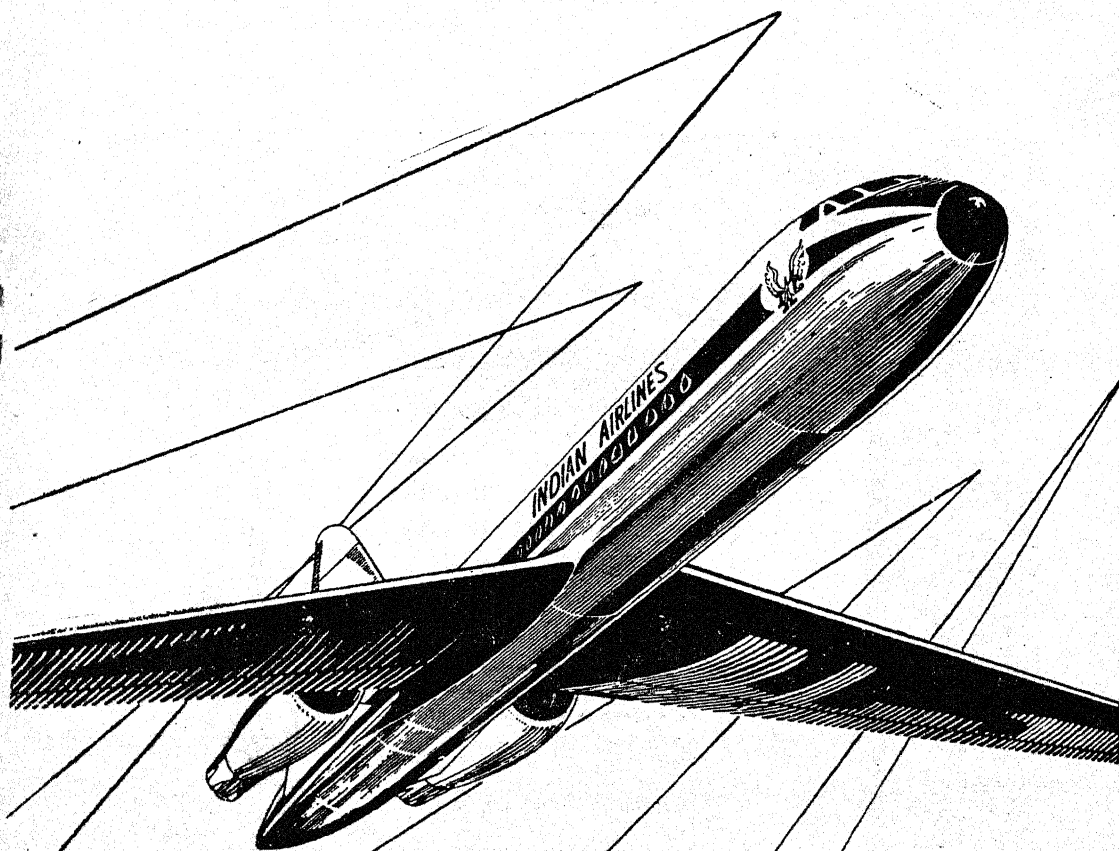
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